Murray County, Minnesota

[Data apply to the entire extent of the map unit within the survey area. Map unit and soil properties for a specific parcel of land may vary somewhat and should be determined by onsite investigation]

31F--Storden loam, 18 to 40 percent slopes

Storden

Extent: 85 percent of the unit

Soil loss tolerance (T factor): 5

Landform(s): moraines

Wind erodibility group (WEG): 4L

Slope gradient: 18 to 40 percent

Wind erodibility index (WEI): 86

Parent material: till

Kw factor (surface layer) .28

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 7e

Flooding: none

Hydric soil: no
Ponding: none

Hydrologic group: B

Drainage class: well drained Potential for frost action: moderate

Representative soil profile	: Texture	Permeability	Available water capacity	рН
A 0 to 9 in	loam	moderate	1.81 to 1.99 in	7.4 to 8.4
C1 9 to 20 in	loam	moderate	1.87 to 2.09 in	7.9 to 8.4
C2 20 to 60 in	clay loam	moderate	5.57 to 6.36 in	7.4 to 8.4

33B--Barnes loam, 2 to 4 percent slopes

Barnes

Extent: 85 percent of the unit

Landform(s): moraines

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 6

Slope gradient: 2 to 4 percent

Wind erodibility index (WEI): 48

Parent material: till

Kw factor (surface layer) .28

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 2e

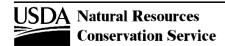
Flooding: none

Hydric soil: no
Ponding: none

Hydrologic group: B

Drainage class: well drained Potential for frost action: moderate

Representativ	e soil profile:	Texture	Permeability	Available water capacity	pН
Ap	0 to 9 in	loam	moderate	1.81 to 1.99 in	6.1 to 7.3
Bw	9 to 17 in	loam	moderate	1.34 to 1.50 in	6.1 to 7.3
Bk,C	17 to 60 in	loam	moderate	7.30 to 8.15 in	7.4 to 8.4



Murray County, Minnesota

33B2--Barnes loam, 3 to 6 percent slopes, eroded

Barnes, eroded

Extent: 85 percent of the unit

Soil loss tolerance (T factor): 5

Landform(s): moraines

Wind erodibility group (WEG): 6

Slope gradient: 3 to 6 percent Wind erodibility index (WEI): 48
Parent material: till Kw factor (surface layer) .28

Restrictive feature(s): greater than 60 inches Land capability, nonirrigated 2e

Flooding: none Hydric soil: no
Ponding: none Hydrologic group: B

Drainage class: well drained Potential for frost action: moderate

Representative	soil profile:	Texture	Permeability	Available water capacity	рН
Ap	0 to 9 in	loam	moderate	1.81 to 1.99 in	6.1 to 7.3
Bw	9 to 17 in	loam	moderate	1.34 to 1.50 in	6.1 to 7.3
Bk,C 1	7 to 60 in	loam	moderate	7.30 to 8.15 in	7.4 to 8.4

36--Flom clay loam

Flom

Extent: 85 percent of the unit Soil loss tolerance (T factor): 5

Landform(s): swales Wind erodibility group (WEG): 6
Slope gradient: 0 to 2 percent Wind erodibility index (WEI): 48

Parent material: till Kw factor (surface layer) .24

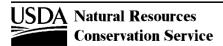
Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 2w

Flooding: none Hydric soil: yes
Ponding: none Hydrologic group: B/D

Drainage class: poorly drained Potential for frost action: high

Representative	e soil profile:	Texture	Permeability	Available water capacity	рН
Ap,A,AB	0 to 23 in	clay loam	moderate	3.88 to 4.34 in	6.1 to 7.3
Bg	23 to 33 in	clay loam	moderate	1.54 to 1.94 in	7.4 to 8.4
Cg	33 to 60 in	clay loam	moderate	3.75 to 4.28 in	7.4 to 8.4



Murray County, Minnesota

51--La Prairie Ioam

La Prairie, occasionally flooded

Extent: 85 percent of the unit

Landform(s): flood plains

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 6

Slope gradient: 0 to 2 percent

Wind erodibility index (WEI): 48

Parent material: alluvium

Kw factor (surface layer) .24

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 1

Flooding: occasional

Hydric soil: no
Ponding: none

Hydrologic group: B

Drainage class: moderately well drained Potential for frost action: moderate

Representative soil profile:	Texture	Permeability	Available water capacity	pН
A1 0 to 13 in	loam	moderate	2.60 to 2.86 in	6.1 to 7.3
A2,Bw 13 to 36 in	loam	moderate	3.88 to 4.34 in	7.4 to 8.4
C 36 to 60 in	stratified fine sandy loam to silty clay loam	moderate	3.36 to 4.56 in	7.4 to 8.4

70--Svea loam

Svea

Extent: 85 percent of the unit

Landform(s): moraines

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 6

Slope gradient: 1 to 3 percent

Wind erodibility index (WEI): 48

Parent material: till

Kw factor (surface layer) .24

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 1

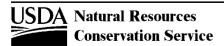
Flooding: none

Hydric soil: no
Ponding: none

Hydrologic group: B

Drainage class: moderately well drained Potential for frost action: moderate

Representativ	e soil profile:	Texture	Permeability	Available water capacity	рН
Ap,A,AB	0 to 19 in	loam	moderate	3.78 to 4.16 in	6.1 to 7.3
Bw	19 to 26 in	loam	moderate	1.20 to 1.35 in	6.1 to 7.3
BC,C	26 to 60 in	loam	moderate	5.76 to 6.43 in	7.4 to 8.4



Murray County, Minnesota

86--Canisteo clay loam

Canisteo

Extent: 85 percent of the unit Soil loss tolerance (T factor): 5

Landform(s): flats Wind erodibility group (WEG): 4L

Slope gradient: 0 to 2 percent

Wind erodibility index (WEI): 86

Parent material: till Kw factor (surface layer) .24

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 2w

Flooding: none Hydric soil: yes
Ponding: none Hydrologic group: B/D

Drainage class: poorly drained Potential for frost action: high

Representative soil profile:	Texture	Permeability	Available water capacity	рН
Ap,A 0 to 17 in	clay loam	moderate	2.88 to 3.22 in	7.4 to 8.4
ABg 17 to 23 in	clay loam	moderate	1.00 to 1.12 in	7.4 to 8.4
Bg 23 to 36 in	clay loam	moderate	1.95 to 2.47 in	7.9 to 8.4
Cg 36 to 60 in	clay loam	moderate	3.36 to 3.84 in	7.4 to 8.4

94B--Terril loam, 2 to 8 percent slopes

Terril

Extent: 90 percent of the unit Soil loss tolerance (T factor): 5

Landform(s): moraines Wind erodibility group (WEG): 6
Slope gradient: 2 to 8 percent Wind erodibility index (WEI): 48

Parent material: colluvium Kw factor (surface layer) .24

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 2e

Flooding: none

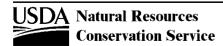
Hydric soil: no

Ponding: none

Hydrologic group: B

Drainage class: moderately well drained Potential for frost action: moderate

Representative soil	profile:	Texture	Permeability	capacity	рН
Ap,A 0 to	35 in loam		moderate	7.01 to 7.71 in	6.1 to 7.3
Bw 35 to	43 in loam		moderate	1.34 to 1.50 in	6.1 to 7.3
BC,C 43 to	60 in loam		moderate	2.88 to 3.22 in	7.4 to 8.4



This report shows only the major soils in each map unit

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Murray County, Minnesota

96A--Collinwood silty clay, 0 to 2 percent slopes

Collinwood

Extent: 85 percent of the unit

Soil loss tolerance (T factor): 5

Landform(s): moraines

Wind erodibility group (WEG): 4

Slope gradient: 0 to 2 percent

Wind erodibility index (WEI): 86

Parent material: lacustrine deposits

Kw factor (surface layer) .32

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 1

Flooding: none

Hydric soil: no
Ponding: none

Hydrologic group: C

Drainage class: moderately well drained Potential for frost action: high

Representative	e soil profile:	Texture	9	Permeability	Available water capacity	рН
Ap,A,AB	0 to 18 in	silty clay		moderately slow	2.54 to 3.08 in	6.1 to 7.3
BA,Bw	18 to 34 in	silty clay		moderately slow	2.05 to 2.52 in	6.1 to 7.3
C 3	34 to 60 in	silty clay		moderately slow	2.86 to 3.90 in	7.4 to 8.4

96B--Collinwood silty clay, 2 to 6 percent slopes

Collinwood

Extent: 85 percent of the unit

Landform(s): moraines

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 4

Slope gradient: 2 to 6 percent

Wind erodibility index (WEI): 86

Parent material: lacustrine deposits

Kw factor (surface layer) .32

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 2e

Flooding: none

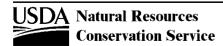
Hydric soil: no

Ponding: none

Hydrologic group: C

Drainage class: moderately well drained Potential for frost action: high

Representativ	ve soil profile:	Texture	Permeability	Available water capacity	рН
Ap,A,AB	0 to 18 in	silty clay	moderately slow	2.54 to 3.08 in	6.1 to 7.3
BA,Bw	18 to 34 in	silty clay	moderately slow	2.05 to 2.52 in	6.1 to 7.3
C	34 to 60 in	silty clay	moderately slow	2.86 to 3.90 in	7.4 to 8.4



Murray County, Minnesota

102B--Clarion loam, 2 to 4 percent slopes

Clarion

Extent: 85 percent of the unit

Soil loss tolerance (T factor): 5

Landform(s): moraines

Wind erodibility group (WEG): 6

Slope gradient: 2 to 4 percent Wind erodibility index (WEI): 48
Parent material: till Kw factor (surface layer) .24

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 2e

Flooding: none Hydric soil: no
Ponding: none Hydrologic group: B

Drainage class: well drained Potential for frost action: moderate

Representative	soil profile:	Texture	Permeability	Available water capacity	рН
Ap,AB	0 to 12 in	loam	moderate	2.36 to 2.60 in	6.1 to 7.3
Bw ′	12 to 23 in	loam	moderate	1.87 to 2.09 in	6.1 to 7.3
C 2	23 to 60 in	loam	moderate	6.29 to 7.03 in	7.4 to 8.4

102B2--Clarion loam, 3 to 6 percent slopes, eroded

Clarion, eroded

Extent: 85 percent of the unit

Soil loss tolerance (T factor): 5

Landform(s): moraines

Wind erodibility group (WEG): 6

Slope gradient: 3 to 6 percent

Wind erodibility index (WEI): 48

Parent material: till Kw factor (surface layer) .24
Restrictive feature(s): greater than 60 inches Land capability, nonirrigated 2e

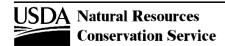
Flooding: none

Hydric soil: no
Ponding: none

Hydrologic group: B

Drainage class: well drained Potential for frost action: moderate

Representative	e soil profile:	Texture	Permeability	Available water capacity	рН
Ap,AB	0 to 12 in	loam	moderate	2.36 to 2.60 in	6.1 to 7.3
Bw	12 to 23 in	loam	moderate	1.87 to 2.09 in	6.1 to 7.3
C	23 to 60 in	loam	moderate	6.29 to 7.03 in	7.4 to 8.4



Murray County, Minnesota

113--Webster clay loam

Webster

Extent: 85 percent of the unit Soil loss tolerance (T factor): 5

Landform(s): swales Wind erodibility group (WEG): 6

Slope gradient: 0 to 2 percent

Wind erodibility index (WEI): 48

Parent material: till

Kw factor (surface layer) .24

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 2w

Flooding: none

Hydric soil: yes

Ponding: none

Hydrologic group: B/D

Drainage class: poorly drained Potential for frost action: high

Representative	e soil profile:	Texture	Permeability	Available water capacity	pН
Ap,A,AB	0 to 20 in	clay loam	moderate	3.41 to 3.81 in	6.1 to 7.3
BA,Bg	20 to 30 in	clay loam	moderate	1.48 to 1.87 in	6.1 to 7.3
Cg	30 to 60 in	clay loam	moderate	4.19 to 4.79 in	7.4 to 8.4

114--Glencoe silty clay loam

Glencoe

Extent: 85 percent of the unit

Landform(s): depressions

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 7

Slope gradient: 0 to 1 percent

Wind erodibility index (WEI): 38

Parent material: till

Kw factor (surface layer) .28

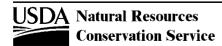
Parent material: till Kw factor (surface layer) .28

Restrictive feature(s): greater than 60 inches Land capability, nonirrigated 3w

Flooding: none Hydric soil: yes
Ponding: frequent Hydrologic group: B/D

Drainage class: very poorly drained Potential for frost action: high

Representative	soil profile:	Texture	Permeability	Available water capacity	рН
Ар	0 to 9 in	silty clay loam	moderate	1.63 to 1.99 in	6.1 to 7.3
A,ABg	9 to 33 in	silty clay loam	moderate	4.32 to 5.28 in	6.1 to 7.3
Bg 33	3 to 46 in	clay loam	moderate	1.95 to 2.47 in	6.1 to 7.3
C 40	6 to 60 in	clay loam	moderate	1.93 to 2.20 in	7.4 to 8.4



Murray County, Minnesota

118--Crippin loam

Crippin

Extent: 85 percent of the unit

Soil loss tolerance (T factor): 5

Landform(s): moraines

Wind erodibility group (WEG): 4L

Slope gradient: 1 to 3 percent

Wind erodibility index (WEI): 86

Parent material: till

Kw factor (surface layer) .24

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 1

Flooding: none Hydric soil: no
Ponding: none Hydrologic group: B

Drainage class: somewhat poorly drained Potential for frost action: high

Representative s	soil profile:	Texture	Permeability	Available water capacity	pН
Ap,AB 0	to 17 in	loam	moderate	3.39 to 3.72 in	7.4 to 8.4
Bw 17	to 28 in	loam	moderate	1.87 to 2.09 in	7.9 to 8.4
Bk,Cg 28	to 60 in	loam	moderate	5.42 to 6.06 in	7.4 to 8.4

127A--Sverdrup sandy loam, 0 to 2 percent slopes

Sverdrup

Extent: 85 percent of the unit

Soil loss tolerance (T factor): 4

Landform(s): moraines

Wind erodibility group (WEG): 3

Slope gradient: 0 to 2 percent

Wind erodibility index (WEI): 86

Parent material: outwash

Kw factor (surface layer) .20

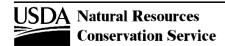
Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 3s

Flooding: none Hydric soil: no Ponding: none Hydrologic group: B

Drainage class: well drained Potential for frost action: low

Representative	e soil profile:	Texture	Permeability	Available water capacity	рН
Ap	0 to 8 in	sandy loam	moderately rapid	1.02 to 1.18 in	6.1 to 7.3
Bw	8 to 28 in	sandy loam	moderately rapid	2.41 to 2.81 in	6.1 to 7.3
C :	28 to 60 in	sand	rapid	1.59 to 2.23 in	7.4 to 8.4



Murray County, Minnesota

127B--Sverdrup sandy loam, 2 to 6 percent slopes

Sverdrup

Extent: 85 percent of the unit

Landform(s): stream terraces

Slope gradient: 2 to 6 percent

Parent material: outwash

Restrictive feature(s): greater than 60 inches

Soil loss tolerance (T factor): 4

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

Kw factor (surface layer) .20

Land capability, nonirrigated 3e

Flooding: none

Hydric soil: no

Ponding: none

Hydrologic group: B

Drainage class: well drained Potential for frost action: low

Representative s	soil profile:	Texture	Permeability	Available water capacity	pН
Ap 0	to 8 in	sandy loam	moderately rapid	1.02 to 1.18 in	6.1 to 7.3
Bw 8	to 28 in	loam	moderately rapid	3.41 to 3.81 in	6.1 to 7.3
C 28	to 60 in	sand	rapid	1.59 to 2.23 in	7.4 to 8.4

127C--Sverdrup sandy loam, 6 to 12 percent slopes

Sverdrup

Extent: 85 percent of the unit

Landform(s): stream terraces

Slope gradient: 6 to 12 percent

Parent material: outwash

Restrictive feature(s): greater than 60 inches

Soil loss tolerance (T factor): 4

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

Kw factor (surface layer) .20

Land capability, nonirrigated 4e

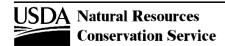
Flooding: none

Hydric soil: no
Ponding: none

Hydrologic group: B

Drainage class: well drained Potential for frost action: low

Representative	e soil profile:	Texture	Permeability	Available water capacity	рН
Ap	0 to 8 in	sandy loam	moderately rapid	1.02 to 1.18 in	6.1 to 7.3
Bw	8 to 28 in	loam	moderately rapid	3.41 to 3.81 in	6.1 to 7.3
C :	28 to 60 in	sand	rapid	1.59 to 2.23 in	7.4 to 8.4



Murray County, Minnesota

130--Nicollet loam

Nicollet

Extent: 85 percent of the unit

Soil loss tolerance (T factor): 5

Landform(s): moraines

Wind erodibility group (WEG): 6

Slope gradient: 1 to 3 percent

Wind erodibility index (WEI): 48

Parent material: till

Kw factor (surface layer) .24

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 1

Flooding: none

Hydric soil: no

Ponding: none Hydrologic group: B

Drainage class: moderately well drained Potential for frost action: high

Representative	soil profile:	Texture	Permeability	Available water capacity	рН
Ap,AB	0 to 16 in	loam	moderate	3.23 to 3.55 in	6.1 to 7.3
Bw ′	16 to 28 in	loam	moderate	2.01 to 2.24 in	6.1 to 7.3
C 2	28 to 60 in	loam	moderate	5.42 to 6.06 in	7.4 to 8.4

140--Spicer silty clay loam

Spicer

Extent: 85 percent of the unit Soil loss tolerance (T factor): 5

Landform(s): flats

Wind erodibility group (WEG): 4L

Slope gradient: 0 to 2 percent

Wind erodibility index (WEI): 86

Parent material: lacustrine deposits

Kw factor (surface layer) .28

Restrictive feature(s): greater than 60 inches Land capability, nonirrigated 2w

Flooding: none

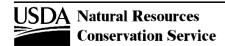
Hydric soil: yes

Ponding: none

Hydrologic group: B/D

Drainage class: poorly drained Potential for frost action: high

Representativ	e soil profile:	Texture	Permeability	Available water capacity	рН
Ap,AB	0 to 14 in	silty clay loam	moderate	2.55 to 3.12 in	7.4 to 8.4
Bg,BCg	14 to 31 in	silty clay loam	moderate	2.71 to 3.22 in	7.4 to 8.4
Cg	31 to 60 in	silt loam	moderate	5.75 to 6.32 in	7.4 to 8.4



This report shows only the major soils in each map unit

Tabular Data Version: 10
Tabular Data Version Date: 10/12/2010

Murray County, Minnesota

141A--Egeland sandy loam, 0 to 2 percent slopes

Egeland

Extent: 85 percent of the unit

Landform(s): stream terraces

Slope gradient: 0 to 2 percent

Parent material: outwash

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Kw factor (surface layer) .20
Land capability, nonirrigated 3s

Hydric soil: no Hydrologic group: B

Potential for frost action: low

Representative soil profile	Texture	Permeability	Available water capacity	рН
Ap 0 to 9 in	sandy loam	moderately rapid	1.18 to 1.36 in	6.1 to 7.3
Bw 9 to 26 in	sandy loam	moderately rapid	2.03 to 2.37 in	6.1 to 7.3
BC 26 to 36 in	loamy sand	moderately rapid	0.79 to 0.98 in	7.4 to 8.4
C 36 to 60 in	stratified fine sand to silt loam	moderate	1.20 to 5.28 in	7.4 to 8.4

Murray County, Minnesota

141B--Egeland sandy loam, 2 to 6 percent slopes

Egeland

Extent: 85 percent of the unit

Landform(s): stream terraces

Slope gradient: 2 to 6 percent

Parent material: outwash

Restrictive feature(s): greater than 60 inches

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

Kw factor (surface layer) .20

Land capability, nonirrigated 3e

Flooding: none

Hydric soil: no

Ponding: none

Hydrologic group: B

Drainage class: well drained Potential for frost action: low

Representative	soil profile:	Texture	Permeability	Available water capacity	рН
Ap (0 to 9 in	sandy loam	moderately rapid	1.18 to 1.36 in	6.1 to 7.3
Bw 9	9 to 26 in	sandy loam	moderately rapid	2.03 to 2.37 in	6.1 to 7.3
BC 26	6 to 36 in	loamy sand	moderately rapid	0.79 to 0.98 in	7.4 to 8.4
C 36	6 to 60 in	stratified fine sand to silt loam	moderate	1.20 to 5.28 in	7.4 to 8.4

184--Hamerly loam

Hamerly

Extent: 85 percent of the unit

Landform(s): moraines

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 4L

Slope gradient: 1 to 3 percent

Wind erodibility index (WEI): 86

Parent material: till Kw factor (surface layer) .28

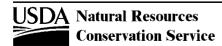
Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 2s

Flooding: none Hydric soil: no
Ponding: none Hydrologic group: B

Drainage class: moderately well drained Potential for frost action: high

Representativ	e soil profile:	Texture	Permeability	Available water capacity	рН
Ap	0 to 8 in	loam	moderate	1.57 to 1.73 in	7.4 to 8.4
A,ABk	8 to 20 in	loam	moderate	2.07 to 2.32 in	7.9 to 8.4
Bk,C	20 to 60 in	loam	moderate	6.76 to 7.56 in	7.4 to 8.4



Murray County, Minnesota

211--Lura silty clay

Lura

Extent: 85 percent of the unit

Landform(s): depressions

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 4

Slope gradient: 0 to 1 percent

Wind erodibility index (WEI): 86

Parent material: lacustrine deposits

Kw factor (surface layer) .28

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 3w

Flooding: none Hydric soil: yes
Ponding: frequent Hydrologic group: C/D

Drainage class: very poorly drained Potential for frost action: high

Representative soil profile:	Texture	Permeability	Available water capacity	рН
Ap,A1,A2 0 to 41 in	silty clay	slow	5.73 to 6.96 in	6.1 to 7.3
Bg,Cg 41 to 60 in	silty clay	moderately slow	2.46 to 3.02 in	7.4 to 8.4

219--Rolfe silt loam

Drainage class: very poorly drained

Rolfe

Extent: 85 percent of the unit

Landform(s): depressions

Wind erodibility group (WEG): 6

Slope gradient: 0 to 1 percent

Wind erodibility index (WEI): 48

Parent material: till

Kw factor (surface layer) .37

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 3w

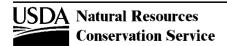
Flooding: none

Hydric soil: yes

Ponding: frequent

Hydrologic group: C

Representative	soil profile:	Texture	Permeability	Available water capacity	рН
Ap,E	0 to 20 in	silt loam	moderate	4.42 to 4.82 in	6.1 to 7.3
Btg 2	20 to 36 in	silty clay	slow	2.05 to 2.52 in	6.1 to 7.3
BCg,Cg 3	36 to 60 in	clay loam	moderate	3.36 to 3.84 in	7.4 to 8.4



This report shows only the major soils in each map unit

Potential for frost action: high

Murray County, Minnesota

229--Waldorf silty clay

Waldorf

Extent: 85 percent of the unit Soil loss tolerance (T factor): 5

Landform(s): flats Wind erodibility group (WEG): 4

Slope gradient: 0 to 1 percent Wind erodibility index (WEI): 86

Parent material: lacustrine deposits Kw factor (surface layer) .28

Restrictive feature(s): greater than 60 inches Land capability, nonirrigated 2w

Flooding: none

Hydric soil: yes

Ponding: none

Hydrologic group: C/D

Drainage class: poorly drained Potential for frost action: high

Representative soil	profile:	Texture	Permeability	Available water capacity	рН
A,AB 0 to	21 in silty clay		moderately slow	2.92 to 3.55 in	6.1 to 7.3
Bg 21 to	42 in silty clay		moderately slow	2.76 to 3.40 in	6.1 to 7.3
Cg 42 to	60 in silty clay		moderately slow	1.95 to 2.66 in	7.4 to 8.4

236--Vallers clay loam

Vallers

Extent: 85 percent of the unit Soil loss tolerance (T factor): 5

Landform(s): flats Wind erodibility group (WEG): 4L Slope gradient: 0 to 2 percent Wind erodibility index (WEI): 86

Parent material: till Kw factor (surface layer) .28

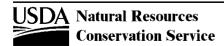
Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 2w

Flooding: none Hydric soil: yes
Ponding: none Hydrologic group: B/D

Drainage class: poorly drained Potential for frost action: high

Representative	soil profile:	Texture	Permeability	Available water capacity	рН
Ap,A	0 to 15 in	clay loam	moderate	2.54 to 2.84 in	7.4 to 8.4
ABk	15 to 23 in	clay loam	moderate	1.18 to 1.50 in	7.9 to 8.4
Cg 2	23 to 60 in	loam	moderate	6.29 to 7.03 in	7.4 to 8.4



Murray County, Minnesota

246--Marysland loam

Marysland

Extent: 85 percent of the unit Soil loss tolerance (T factor): 4

Landform(s): flats Wind erodibility group (WEG): 4L

Slope gradient: 0 to 2 percent

Wind erodibility index (WEI): 86

Parent material: outwash

Kw factor (surface layer) .24

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 2w

Flooding: none Hydric soil: yes
Ponding: none Hydrologic group: B/D

Drainage class: poorly drained Potential for frost action: high

Representative	soil profile:	Texture	Permeability	Available water capacity	рН
Ap,A	0 to 17 in	loam	moderate	3.39 to 3.72 in	7.4 to 8.4
Cg 1	7 to 27 in	loam	moderate	1.67 to 1.87 in	7.9 to 8.4
2C 2	7 to 60 in	stratified gravelly coarse sand to fine sand	rapid	0.66 to 2.31 in	7.4 to 8.4

339A--Fordville loam, 0 to 2 percent slopes

Parent material: outwash

Fordville

Extent: 80 percent of the unit Soil loss tolerance (T factor): 4

Landform(s): moraines Wind erodibility group (WEG): 6
Slope gradient: 0 to 2 percent Wind erodibility index (WEI): 48

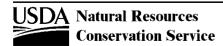
Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 2s

Flooding: none Hydric soil: no
Ponding: none Hydrologic group: B

Drainage class: well drained Potential for frost action: low

Representative	soil profile:	Texture	Permeability	Available water capacity	рН
Ap	0 to 7 in	loam	moderate	1.42 to 1.56 in	6.1 to 7.3
Bw1	7 to 15 in	loam	moderate	1.34 to 1.50 in	6.1 to 7.3
Bw2,BC	15 to 27 in	loam	moderately rapid	2.01 to 2.24 in	7.4 to 8.4
2C :	27 to 60 in	gravelly sand	very rapid	1.65 to 2.31 in	7.4 to 8.4



This report shows only the major soils in each map unit

Kw factor (surface layer) .24

Murray County, Minnesota

339B--Fordville loam, 2 to 6 percent slopes

Fordville

Extent: 80 percent of the unit Soil loss tolerance (T factor): 4

Landform(s): moraines Wind erodibility group (WEG): 6
Slope gradient: 2 to 6 percent Wind erodibility index (WEI): 48

Parent material: outwash

Kw factor (surface layer) .24

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 2e

Flooding: none Hydric soil: no
Ponding: none Hydrologic group: B

Drainage class: well drained Potential for frost action: low

Representative	soil profile:	Texture	Permeability	Available water capacity	рН
Ap	0 to 7 in	loam	moderate	1.42 to 1.56 in	6.1 to 7.3
Bw1	7 to 15 in	loam	moderate	1.34 to 1.50 in	6.1 to 7.3
Bw2,BC ′	15 to 27 in	loam	moderately rapid	2.01 to 2.24 in	7.4 to 8.4
2C 2	27 to 60 in	gravelly sand	very rapid	1.65 to 2.31 in	7.4 to 8.4

341A--Arvilla sandy loam, 0 to 2 percent slopes

Arvilla

Extent: 90 percent of the unit

Landform(s): stream terraces

Slope gradient: 0 to 2 percent

Parent material: outwash

Soil loss tolerance (T factor): 3

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

Kw factor (surface layer) .20

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 3s

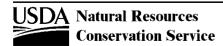
Flooding: none

Hydric soil: no
Ponding: none

Hydrologic group: B

Drainage class: somewhat excessively drained Potential for frost action: low

Representative soil profile	: Texture	Permeability	capacity	рН
Ap 0 to 8 in	sandy loam	moderately rapid	1.02 to 1.18 in	6.1 to 7.3
Bw 8 to 19 in	sandy loam	moderately rapid	1.32 to 1.54 in	6.1 to 7.3
2C 19 to 60 in	gravelly coarse sand	very rapid	0.82 to 1.64 in	7.4 to 8.4



This report shows only the major soils in each map unit

A. allahla ...atau

Murray County, Minnesota

341B--Arvilla sandy loam, 2 to 6 percent slopes

Arvilla

Extent: 90 percent of the unit

Landform(s): stream terraces

Slope gradient: 2 to 6 percent

Parent material: outwash

Restrictive feature(s): greater than 60 inches

Soil loss tolerance (T factor): 3

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

Kw factor (surface layer) .20

Land capability, nonirrigated 4s

Flooding: none Hydric soil: no
Ponding: none Hydrologic group: B

Drainage class: somewhat excessively drained Potential for frost action: low

Representative	soil profile:	Texture	Permeability	Available water capacity	рН
Ap	0 to 8 in	sandy loam	moderately rapid	1.02 to 1.18 in	6.1 to 7.3
Bw	8 to 19 in	sandy loam	moderately rapid	1.32 to 1.54 in	6.1 to 7.3
2C 1	9 to 60 in	gravelly coarse sand	very rapid	0.82 to 1.64 in	7.4 to 8.4

341C--Arvilla sandy loam, 6 to 12 percent slopes

Arvilla

Extent: 90 percent of the unit

Landform(s): stream terraces

Slope gradient: 6 to 12 percent

Parent material: outwash

Restrictive feature(s): greater than 60 inches

Soil loss tolerance (T factor): 3

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

Kw factor (surface layer) .20

Land capability, nonirrigated 4e

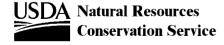
Flooding: none

Hydric soil: no
Ponding: none

Hydrologic group: B

Drainage class: somewhat excessively drained Potential for frost action: low

Representative	soil profile:	Texture	Permeability	Available water capacity	рН
Ap	0 to 8 in	sandy loam	moderately rapid	1.02 to 1.18 in	6.1 to 7.3
Bw	8 to 19 in	sandy loam	moderately rapid	1.32 to 1.54 in	6.1 to 7.3
2C 1	9 to 60 in	gravelly coarse sand	very rapid	0.82 to 1.64 in	7.4 to 8.4



Murray County, Minnesota

344--Quam silty clay loam

Quam

Extent: 85 percent of the unit

Landform(s): depressions

Wind erodibility group (WEG): 7

Slope gradient: 0 to 1 percent

Wind erodibility index (WEI): 38

Parent material: till

Kw factor (surface layer) .28

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 3w

Flooding: none Hydric soil: yes

Ponding: frequent Hydrologic group: B/D

Drainage class: very poorly drained Potential for frost action: high

Representative	soil profile:	Texture	Permeability	Available water capacity	рН
Ap	0 to 10 in	silty clay loam	moderately slow	1.77 to 2.17 in	6.1 to 7.3
Α ′	10 to 57 in	silty clay loam	moderately slow	8.50 to 10.39 in	6.1 to 7.3
Cg !	57 to 60 in	silty clay loam	moderately slow	0.44 to 0.52 in	7.4 to 8.4

359--Lamoure silty clay loam, frequently flooded

Lamoure, frequently flooded

Extent: 80 percent of the unit

Landform(s): flood plains

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 4L

Slope gradient: 0 to 2 percent

Wind erodibility index (WEI): 86

Parent material: alluvium

Kw factor (surface layer) .28

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 6w

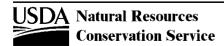
Flooding: frequent

Hydric soil: yes

Ponding: none Hydrologic group: B/D

Drainage class: poorly drained Potential for frost action: high

Representative soil profile:	Texture	Permeability	Available water capacity	рН
Ap 0 to 11 in	silty clay loam	moderate	1.98 to 2.43 in	7.4 to 8.4
AC 11 to 38 in	silty clay loam	moderate	4.82 to 5.89 in	7.4 to 8.4
Cg 38 to 60 in	stratified sandy loam to silty clay	moderate	2.43 to 4.19 in	7.4 to 8.4



Murray County, Minnesota

392--Biscay loam

Biscay

Extent: 90 percent of the unit Soil loss tolerance (T factor): 4

Landform(s): flats Wind erodibility group (WEG): 6

Slope gradient: 0 to 2 percent

Wind erodibility index (WEI): 48

Parent material: outwash

Kw factor (surface layer) .28

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 2w

Flooding: none Hydric soil: yes
Ponding: none Hydrologic group: B/D

Drainage class: poorly drained Potential for frost action: high

Representative soil profil	e: Texture	Permeability	Available water capacity	рН
Ap,A,AB 0 to 22 in	loam	moderate	4.41 to 4.85 in	6.1 to 7.3
Bg1 22 to 30 in	loam	moderate	1.34 to 1.50 in	6.1 to 7.3
Bg2 30 to 38 in	gravelly loam	moderately rapid	1.34 to 1.50 in	7.4 to 8.4
2Cg 38 to 60 in	stratified very gravelly coarse sand to loamy sand	rapid	0.44 to 2.20 in	7.4 to 8.4

402E--Sioux sandy loam, 2 to 40 percent slopes

Sioux

Extent: 85 percent of the unit Soil loss tolerance (T factor): 3

Landform(s): moraines

Wind erodibility group (WEG): 3

Slope gradient: 2 to 40 percent

Wind erodibility index (WEI): 86

Parent material: outwash

Kw factor (surface layer) .20

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 6s

Flooding: none

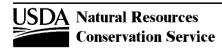
Hydric soil: no

Ponding: none

Hydrologic group: A

Drainage class: excessively drained Potential for frost action: low

Representative	e soil profile:	Texture	Permeability	Available water capacity	рН
A	0 to 7 in	sandy loam	moderately rapid	0.92 to 1.06 in	7.4 to 8.4
AC	7 to 13 in	gravelly sandy loam	moderately rapid	0.71 to 0.83 in	7.9 to 8.4
C	13 to 60 in	very gravelly sand	very rapid	2.34 to 3.28 in	7.4 to 8.4



Murray County, Minnesota

418--Lamoure silty clay loam, occasionally flooded

Lamoure, occasionally flooded

Extent: 80 percent of the unit

Landform(s): flood plains

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 4L

Slope gradient: 0 to 2 percent

Wind erodibility index (WEI): 86

Parent material: alluvium

Kw factor (surface layer) .28

Restrictive feature(s): greater than 60 inches Land capability, nonirrigated 2w

Flooding: occasional Hydric soil: yes
Ponding: none Hydrologic group: B/D

Drainage class: poorly drained Potential for frost action: high

Representativ	e soil	profile:	Texture	Permeability	Available water capacity	рН
Ар	0 to	11 in	silty clay loam	moderate	1.98 to 2.43 in	7.4 to 8.4
AC	11 to	38 in	silty clay loam	moderate	4.82 to 5.89 in	7.4 to 8.4
Cg	38 to	60 in	stratified sandy loam to silty clay loam	moderate	2.43 to 4.19 in	7.4 to 8.4

506--Overly silty clay loam

Overly

Extent: 85 percent of the unit Soil loss tolerance (T factor): 5

Landform(s): moraines

Wind erodibility group (WEG): 7

Slope gradient: 1 to 3 percent

Wind erodibility index (WEI): 38

Parent material: lacustrine deposits

Kw factor (surface layer) .28

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 1

Flooding: none

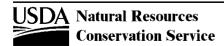
Hydric soil: no

Ponding: none

Hydrologic group: C

Drainage class: moderately well drained Potential for frost action: high

Representativ	e soil profile:	Texture	Permeability	capacity	рН
Ap,A	0 to 14 in	silty clay loam	moderately slow	2.55 to 3.12 in	6.1 to 7.3
AB,Bw	14 to 26 in	silty clay loam	moderate	1.89 to 2.24 in	7.4 to 8.4
C	26 to 60 in	stratified silt loam to silty clay	moderate	4.74 to 5.42 in	7.4 to 8.4



This report shows only the major soils in each map unit

Available water

Murray County, Minnesota

562--Knoke silty clay loam

Knoke

Extent: 85 percent of the unit

Landform(s): depressions

Wind erodibility group (WEG): 4L

Slope gradient: 0 to 1 percent

Wind erodibility index (WEI): 86

Parent material: lacustrine deposits

Kw factor (surface layer) .32

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 3w

Flooding: none Hydric soil: yes
Ponding: frequent Hydrologic group: B/D

Drainage class: very poorly drained Potential for frost action: high

Representative	soil profile:	Texture	Permeability	Available water capacity	рН
Ар	0 to 10 in	silty clay loam	moderately slow	1.77 to 2.17 in	7.4 to 8.4
A 1	10 to 20 in	silty clay loam	moderately slow	1.84 to 2.25 in	7.4 to 8.4
Ag,Bg 2	20 to 60 in	silty clay	moderately slow	5.17 to 6.36 in	7.9 to 8.4

590--Moines clay loam

Moines

Extent: 85 percent of the unit

Soil loss tolerance (T factor): 5

Landform(s): moraines

Wind erodibility group (WEG): 4L

Slope gradient: 1 to 2 percent

Wind erodibility index (WEI): 86

Parent material: till

Kw factor (surface layer) .24

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 2s

Flooding: none

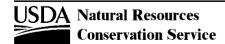
Hydric soil: no

Ponding: none

Hydrologic group: B

Drainage class: somewhat poorly drained Potential for frost action: high

Representativ	e soil profile:	Texture	Permeability	Available water capacity	рН
Ap,ABy	0 to 14 in	clay loam	moderate	2.41 to 2.69 in	7.4 to 8.4
Byg,Bkg	14 to 40 in	loam	moderate	4.42 to 4.94 in	7.9 to 8.4
2Cg	40 to 60 in	loam	moderately slow	3.35 to 3.74 in	7.4 to 8.4



Murray County, Minnesota

594--Jeffers clay loam

Jeffers

Extent: 85 percent of the unit

Landform(s): flats

Slope gradient: 0 to 2 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

Drainage class: poorly drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 6

Wind erodibility index (WEI): 48

Kw factor (surface layer) .24

Land capability, nonirrigated 2w

Hydric soil: yes

Hydrologic group: B/D

Potential for frost action: high

Representative soil profile:	Texture	Permeability	Available water capacity	рН
Ap,A 0 to 18 in	clay loam	moderate	3.08 to 3.44 in	7.4 to 8.4
BA,Bk 18 to 35 in	clay loam	moderate	2.54 to 3.22 in	7.9 to 8.4
2C 35 to 60 in	clay loam	moderately slow	3 47 to 3 97 in	7.4 to 8.4

Murray County, Minnesota

902C2--Barnes-Buse loams, 6 to 12 percent slopes, eroded

Barnes, eroded

Extent: 50 percent of the unit

Soil loss tolerance (T factor): 5

Landform(s): moraines

Wind erodibility group (WEG): 6

Slope gradient: 6 to 12 percent Wind erodibility index (WEI): 48
Parent material: till Kw factor (surface layer) .28

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 3e

Flooding: none Hydric soil: no
Ponding: none Hydrologic group: B

Drainage class: well drained Potential for frost action: moderate

Representative	e soil profile:	Texture	Permeability	capacity	рН
Ap	0 to 8 in	loam	moderate	1.57 to 1.73 in	6.1 to 7.3
Bw	8 to 17 in	loam	moderate	1.54 to 1.72 in	6.1 to 7.3
Bk,C	17 to 60 in	loam	moderate	7.30 to 8.15 in	7.4 to 8.4

Buse, eroded

Extent: 35 percent of the unit Soil loss tolerance (T factor): 5

Landform(s): moraines Wind erodibility group (WEG): 4L Slope gradient: 6 to 12 percent Wind erodibility index (WEI): 86

Parent material: till Kw factor (surface layer) .28

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 3e

Flooding: none

Hydric soil: no
Ponding: none

Hydrologic group: B

Drainage class: well drained Potential for frost action: moderate

Representative so	il profile:	Texture	Permeability	Available water capacity	рН
Ap 0 to	o 7 in	loam	moderate	1.42 to 1.56 in	7.4 to 8.4
Bk 7 to	24 in	loam	moderate	2.88 to 3.22 in	7.9 to 8.4
C 24 to	o 60 in	loam	moderate	6.09 to 6.81 in	7.4 to 8.4



Available water

Murray County, Minnesota

904B--Arvilla-Barnes-Buse complex, 2 to 6 percent slopes

Arvilla

Extent: 40 percent of the unit

Soil loss tolerance (T factor): 3

Landform(s): moraines Wind erodibility group (WEG): 3
Slope gradient: 2 to 6 percent Wind erodibility index (WEI): 86

Parent material: outwash

Kw factor (surface layer) .20

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 4s

Flooding: none Hydric soil: no
Ponding: none Hydrologic group: B

Drainage class: somewhat excessively drained Potential for frost action: low

Representative soil profile	Texture	Permeability	capacity	рН
Ap 0 to 8 in	sandy loam	moderately rapid	1.02 to 1.18 in	6.1 to 7.3
Bw 8 to 19 in	sandy loam	moderately rapid	1.32 to 1.54 in	6.1 to 7.3
2C 19 to 60 in	gravelly coarse sand	very rapid	0.82 to 1.64 in	7.4 to 8.4

Barnes

Extent: 30 percent of the unit Soil loss tolerance (T factor): 5

Landform(s): moraines Wind erodibility group (WEG): 6
Slope gradient: 2 to 6 percent Wind erodibility index (WEI): 48

Parent material: till Kw factor (surface layer) .28

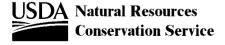
Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 2e

Flooding: none Hydric soil: no
Ponding: none Hydrologic group: B

Drainage class: well drained Potential for frost action: moderate

Representative soil profile:	Texture	Permeability	capacity	рН
Ap 0 to 8 in	loam	moderate	1.57 to 1.73 in	6.1 to 7.3
Bw 8 to 18 in	loam	moderate	1.74 to 1.94 in	6.1 to 7.3
Bk,C 18 to 60 in	loam	moderate	7.09 to 7.93 in	7.4 to 8.4



Available weter

Murray County, Minnesota

904B--Arvilla-Barnes-Buse complex, 2 to 6 percent slopes

Buse

Extent: 15 percent of the unit

Soil loss tolerance (T factor): 5

Landform(s): moraines

Wind erodibility group (WEG): 4L

Slope gradient: 3 to 6 percent

Wind erodibility index (WEI): 86

Parent material: till

Kw factor (surface layer) .28

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 2e
Flooding: none

Hydric soil: no

Flooding: none Hydric soil: no
Ponding: none Hydrologic group: B

Drainage class: well drained Potential for frost action: moderate

Representative	soil profile:	Texture	Permeability	Available water capacity	рН
Ар	0 to 7 in	loam	moderate	1.42 to 1.56 in	7.4 to 8.4
Bk	7 to 24 in	loam	moderate	2.88 to 3.22 in	7.9 to 8.4
C 2	24 to 60 in	loam	moderate	6.09 to 6.81 in	7.4 to 8.4

Murray County, Minnesota

904C--Arvilla-Barnes-Buse complex, 6 to 12 percent slopes

Arvilla

Extent: 40 percent of the unit

Soil loss tolerance (T factor): 3

Landform(s): moraines

Wind erodibility group (WEG): 3

Slope gradient: 6 to 12 percent

Wind erodibility index (WEI): 86

Parent material: outwash

Kw factor (surface layer) .20

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 4e

Flooding: none Hydric soil: no
Ponding: none Hydrologic group: B

Drainage class: somewhat excessively drained Potential for frost action: low

Representative	soil profile:	Texture	Permeability	Available water capacity	рН
Ap	0 to 8 in	sandy loam	moderately rapid	1.02 to 1.18 in	6.1 to 8.4
Bw	8 to 19 in	sandy loam	moderately rapid	1.32 to 1.54 in	6.1 to 8.4
2C 1	9 to 60 in	gravelly coarse sand	very rapid	0.82 to 1.64 in	7.4 to 8.4

Barnes

Extent: 25 percent of the unit Soil loss tolerance (T factor): 5

Landform(s): moraines Wind erodibility group (WEG): 6
Slope gradient: 6 to 12 percent Wind erodibility index (WEI): 48

Parent material: till Kw factor (surface layer) .28

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 3e

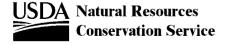
Flooding: none

Hydric soil: no
Ponding: none

Hydrologic group: B

Drainage class: well drained Potential for frost action: moderate

Representative	soil profile:	Texture	Permeability	Available water capacity	рН
Ар	0 to 8 in	loam	moderate	1.57 to 1.73 in	6.1 to 7.3
Bw	8 to 18 in	loam	moderate	1.74 to 1.94 in	6.1 to 7.3
Bk.C 1	8 to 60 in	loam	moderate	7.09 to 7.93 in	7.4 to 8.4



Murray County, Minnesota

904C--Arvilla-Barnes-Buse complex, 6 to 12 percent slopes

Buse

Extent: 25 percent of the unit

Landform(s): moraines

Landform(s): moraines

Wind erodibility group (WEG): 4L

Slope gradient: 6 to 12 percent

Wind erodibility index (WEI): 86

Parent material: till Kw factor (surface layer) .28

Soil loss tolerance (T factor): 5

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 3e

Flooding: none Hydric soil: no
Ponding: none Hydrologic group: B

Drainage class: well drained Potential for frost action: moderate

Representative so	oil profile:	Texture	Permeability	Available water capacity	рН
Ap 0	to 7 in	loam	moderate	1.42 to 1.56 in	7.4 to 8.4
Bk 7	to 24 in	loam	moderate	2.88 to 3.22 in	7.9 to 8.4
C 24	to 60 in	loam	moderate	6.09 to 6.81 in	7.4 to 8.4

Murray County, Minnesota

913D--Buse-Barnes loams, 12 to 18 percent slopes

Buse

Extent: 55 percent of the unit Landform(s): moraines

Slope gradient: 12 to 18 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 4L Wind erodibility index (WEI): 86

Kw factor (surface layer) .28

Land capability, nonirrigated 4e

Hydrologic group: B

Potential for frost action: moderate

Representative	soil profile:	Texture	Permeability	Available water capacity	рН
Ap	0 to 9 in	loam	moderate	1.81 to 1.99 in	7.4 to 8.4
Bk	9 to 24 in	loam	moderate	2.54 to 2.84 in	7.9 to 8.4
C 2	24 to 60 in	loam	moderate	6.09 to 6.81 in	7.4 to 8.4

Barnes

Extent: 35 percent of the unit

Slope gradient: 12 to 18 percent

Parent material: till

Landform(s): moraines

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6

Wind erodibility index (WEI): 48

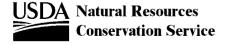
Kw factor (surface layer) .28

Land capability, nonirrigated 4e

Hydrologic group: B

Potential for frost action: moderate

Representativ	e soil profile:	Texture	Permeability	Available water capacity	рН
Ар	0 to 11 in	loam	moderate	2.20 to 2.43 in	6.1 to 7.3
Bw	11 to 19 in	loam	moderate	1.34 to 1.50 in	6.1 to 7.3
Bk,C	19 to 60 in	loam	moderate	6.96 to 7.78 in	7.4 to 8.4



Murray County, Minnesota

917D--Buse-Sioux complex, 12 to 18 percent slopes

Buse

Extent: 50 percent of the unit Landform(s): moraines

Slope gradient: 12 to 18 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 4L

Wind erodibility index (WEI): 86

Kw factor (surface layer) .28

Land capability, nonirrigated 4e

Hydric soil: no Hydrologic group: B

Potential for frost action: moderate

Representative	soil profile:	Texture	Permeability	Available water capacity	рН
Ap	0 to 9 in	loam	moderate	1.81 to 1.99 in	7.4 to 8.4
Bk	9 to 24 in	loam	moderate	2.54 to 2.84 in	7.9 to 8.4
C 2	24 to 60 in	loam	moderate	6.09 to 6.81 in	7.4 to 8.4

Sioux

Extent: 40 percent of the unit

Landform(s): moraines

Slope gradient: 12 to 18 percent

Parent material: outwash

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

Drainage class: excessively drained

Soil loss tolerance (T factor): 3 Wind erodibility group (WEG): 3

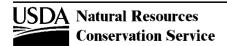
Wind erodibility index (WEI): 86 Kw factor (surface layer) .20

Land capability, nonirrigated 6s

Hydric soil: no Hydrologic group: A

Potential for frost action: low

Representative	soil profile:	Texture	Permeability	Available water capacity	рН
A	0 to 7 in	sandy loam	moderately rapid	0.92 to 1.06 in	6.6 to 8.4
AC	7 to 13 in	gravelly sandy loam	moderately rapid	0.71 to 0.83 in	7.9 to 8.4
C 1	3 to 60 in	gravelly sand	very rapid	2 34 to 3 28 in	7.4 to 8.4



Murray County, Minnesota

920C2--Storden-Clarion-Arvilla complex, 6 to 15 percent slopes, eroded

Storden, eroded

Extent: 40 percent of the unit

Landform(s): moraines

Slope gradient: 6 to 15 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L

Wind erodibility index (WEI): 86

Kw factor (surface layer) .28

Land capability, nonirrigated 3e

Hydrologic group: B

Potential for frost action: moderate

Representative soil profile	: Texture	Permeability	Available water capacity	рН
Ap 0 to 7 in	loam	moderate	1.42 to 1.56 in	7.4 to 8.4
C1 7 to 20 in	loam	moderate	2.21 to 2.47 in	7.9 to 8.4
C2 20 to 60 in	loam	moderate	6.76 to 7.56 in	7.4 to 8.4

Clarion, eroded

Extent: 30 percent of the unit Soil loss tolerance (T factor): 5

Landform(s): moraines Wind erodibility group (WEG): 6

Slope gradient: 6 to 15 percent

Wind erodibility index (WEI): 48

Parent material: till

Kw factor (surface layer) .24

Restrictive feature(s): greater than 60 inches

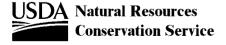
Kw factor (surface layer) .24

Land capability, nonirrigated 3e

Flooding: none Hydric soil: no

Ponding: none Hydrologic group: B
Drainage class: well drained Potential for frost action: moderate

Representative	soil profile:	Texture	Permeability	Available water capacity	рН
Ap,AB	0 to 8 in	loam	moderate	1.57 to 1.73 in	6.1 to 7.3
Bw	8 to 19 in	loam	moderate	1.87 to 2.09 in	6.1 to 7.3
C ′	19 to 60 in	loam	moderate	6.96 to 7.78 in	7.4 to 8.4



Murray County, Minnesota

920C2--Storden-Clarion-Arvilla complex, 6 to 15 percent slopes, eroded

Arvilla

Extent: 20 percent of the unit

Landform(s): moraines

Soil loss tolerance (T factor): 3

Wind erodibility group (WEG): 3

Slope gradient: 6 to 15 percent

Wind erodibility index (WEI): 86

Parent material: outwash

Kw factor (surface layer) .20

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 4e

Flooding: none

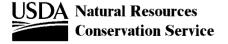
Hydric soil: no

Ponding: none

Hydrologic group: B

Drainage class: somewhat excessively drained Potential for frost action: low

Representative	soil profile:	Texture	Permeability	Available water capacity	рН
Ap	0 to 8 in	sandy loam	moderately rapid	1.02 to 1.18 in	6.1 to 7.3
Bw	8 to 19 in	sandy loam	moderately rapid	1.32 to 1.54 in	6.1 to 7.3
2C 1	19 to 60 in	gravelly coarse sand	very rapid	0.82 to 1.64 in	7.4 to 8.4



Murray County, Minnesota

921C2--Clarion-Storden loams, 6 to 12 percent slopes, eroded

Clarion, eroded

Extent: 45 percent of the unit

Soil loss tolerance (T factor): 5

Landform(s): moraines

Wind erodibility group (WEG): 6

Slope gradient: 6 to 12 percent Wind erodibility index (WEI): 48

Parent material: till Kw factor (surface layer) .24

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 3e

Flooding: none Hydric soil: no
Ponding: none Hydrologic group: B

Drainage class: well drained Potential for frost action: moderate

Representative	e soil	profile:		Texture	Permeability	Available water capacity	рН
Ap,AB	0 to	8 in	loam		moderate	1.57 to 1.73 in	6.1 to 7.3
Bw	8 to	19 in	loam		moderate	1.87 to 2.09 in	6.1 to 7.3
C	19 to	60 in	loam		moderate	6.96 to 7.78 in	7.4 to 8.4

Storden, eroded

Extent: 40 percent of the unit Soil loss tolerance (T factor): 5

Landform(s): moraines Wind erodibility group (WEG): 4L Slope gradient: 6 to 12 percent Wind erodibility index (WEI): 86

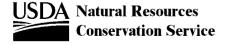
Parent material: till Kw factor (surface layer) .28

Restrictive feature(s): greater than 60 inches Land capability, nonirrigated 3e

Flooding: none Hydric soil: no
Ponding: none Hydrologic group: B

Drainage class: well drained Potential for frost action: moderate

Representative	soil profile:	Texture	Permeability	Available water capacity	рН
Ар	0 to 7 in	loam	moderate	1.42 to 1.56 in	7.4 to 8.4
C1	7 to 20 in	loam	moderate	2.21 to 2.47 in	7.9 to 8.4
C2 2	0 to 60 in	loam	moderate	6.76 to 7.56 in	7.4 to 8.4



Murray County, Minnesota

960D2--Storden-Clarion loams, 12 to 18 percent slopes, eroded

Storden, eroded

Extent: 50 percent of the unit

Soil loss tolerance (T factor): 5

Landform(s): moraines

Wind erodibility group (WEG): 4L

Slope gradient: 12 to 18 percent

Wind erodibility index (WEI): 86

Parent material: till

Kw factor (surface layer) .28

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 4e

Flooding: none Hydric soil: no
Ponding: none Hydrologic group: B

Drainage class: well drained Potential for frost action: moderate

Representative soil profile	Texture	Permeability	capacity	рН
Ap 0 to 8 in	loam	moderate	1.57 to 1.73 in	7.4 to 8.4
C1 8 to 20 in	loam	moderate	2.07 to 2.32 in	7.9 to 8.4
C2 20 to 60 in	loam	moderate	6.76 to 7.56 in	7.4 to 8.4

Clarion, eroded

Extent: 40 percent of the unit Soil loss tolerance (T factor): 5

Landform(s): moraines Wind erodibility group (WEG): 6
Slope gradient: 12 to 18 percent Wind erodibility index (WEI): 48

Parent material: till Kw factor (surface layer) .24

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 4e

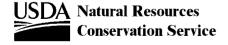
Flooding: none

Hydric soil: no

Ponding: none Hydrologic group: B

Drainage class: well drained Potential for frost action: moderate

Representative soil profile:		Texture	Permeability	Available water capacity	рН
Ap,AB	0 to 8 in	loam	moderate	1.57 to 1.73 in	6.1 to 7.3
Bw	8 to 19 in	loam	moderate	1.87 to 2.09 in	6.1 to 7.3
C	19 to 60 in	loam	moderate	6.96 to 7.78 in	7.4 to 8.4



This report shows only the major soils in each map unit

Available water

Murray County, Minnesota

1024A--Havelock clay loam, 0 to 2 percent slopes, occasionally flooded

Havelock, occasionally flooded

Extent: 75 to 85 percent of the unit Landform(s): flats on flood plains

Slope gradient: 0 to 2 percent

Parent material: alluvium

Restrictive feature(s): greater than 60 inches

Flooding: occasional Ponding: none

Drainage class: poorly drained

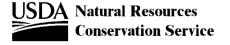
Soil loss tolerance (T factor): 5 Wind erodibility group (WEG): 4L Wind erodibility index (WEI): 86 Kw factor (surface layer) .28 Land capability, nonirrigated 2w

Hydric soil: yes

Hydrologic group: B/D

Potential for frost action: high

Representative	soil profile:	Texture	Permeability	Available water capacity	рН
Ap,A1,A2	0 to 32 in	clay loam	moderate	5.42 to 7.33 in	7.4 to 8.4
Cg 3	32 to 60 in	clay loam	moderate	4.75 to 5.59 in	7.4 to 8.4



Murray County, Minnesota

1030--Pits, gravel-Udorthents complex

Pits, gravel

Extent: 60 percent of the unit Soil loss tolerance (T factor):

Landform(s): moraines, stream terraces Wind erodibility group (WEG):

Wind erodibility index (WEI): Slope gradient: 0 to 50 percent Parent material: Kw factor (surface layer)

Restrictive feature(s): greater than 60 inches Land capability, nonirrigated

Flooding: none Hydric soil: Ponding: none Hydrologic group:

Drainage class: Potential for frost action:

Available water Texture Permeability рН Representative soil profile: capacity

Udorthents

Extent: 40 percent of the unit Soil loss tolerance (T factor):

Landform(s): moraines, stream terraces Wind erodibility group (WEG):

Slope gradient: 0 to 25 percent Wind erodibility index (WEI):

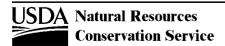
Parent material: Kw factor (surface layer)

Restrictive feature(s): greater than 60 inches Land capability, nonirrigated

Hydric soil: Flooding: none Ponding: none Hydrologic group:

Drainage class: Potential for frost action:

Available water Texture Permeability рН Representative soil profile: capacity



Murray County, Minnesota

1051--Glencoe silty clay loam, ponded

Glencoe, ponded

Extent: 85 percent of the unit

Landform(s): depressions

Slope gradient: 0 to 1 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none
Ponding: frequent

Drainage class: very poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 8
Wind erodibility index (WEI): 0
Kw factor (surface layer) .28
Land capability, nonirrigated 8w

Hydric soil: yes Hydrologic group: D

Potential for frost action: high

Representative soil profile:		Texture	Permeability	Available water capacity	рН
A,ABg	0 to 33 in	silty clay loam	moderate	5.95 to 7.28 in	6.1 to 7.3
Bg	33 to 46 in	silty clay loam	moderate	2.08 to 2.47 in	6.1 to 7.3
C	46 to 60 in	clay loam	moderate	1.93 to 2.20 in	7.4 to 8.4

Murray County, Minnesota

GP--Pits, gravel-Udipsamments complex

Pits, gravel

Extent: 50 to 100 percent of the unit

Landform(s): moraines, outwash plains, stream terraces

Slope gradient: 0 to 45 percent

Parent material: sandy and gravelly outwash Restrictive feature(s): greater than 60 inches

Flooding: Ponding:

Drainage class:

Soil loss tolerance (T factor):

Wind erodibility group (WEG):

Wind erodibility index (WEI):

Kw factor (surface layer)

Land capability, nonirrigated

Hydric soil:

Hydrologic group:

Potential for frost action:

Representative soil profile:

Texture

Permeability

Available water capacity

pH

Udipsamments

Extent: 15 to 30 percent of the unit

Landform(s): moraines, outwash plains, stream terraces

Slope gradient: 0 to 6 percent Parent material: outwash

Restrictive feature(s): greater than 60 inches

Flooding: Ponding:

Drainage class: excessively drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 2

Wind erodibility index (WEI): 134

Kw factor (surface layer)

Land capability, nonirrigated

Hydric soil:

Hydrologic group: A

Potential for frost action:

Representative soil profile: Texture

re

Permeability

Available water capacity

На

Murray County, Minnesota

J1A--Parnell silty clay loam, depressional, 0 to 1 percent slopes

Parnell, depressional

Extent: 85 to 95 percent of the unit

Landform(s): depressions on lake plains, depressions on

moraines, depressions on till plains

Slope gradient: 0 to 1 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none
Ponding: frequent

Drainage class: very poorly drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 7

Wind erodibility index (WEI): 38

Kw factor (surface layer) .37

Land capability, nonirrigated 3w

Hydric soil: yes

Hydrologic group: C/D

Representative	soil profile:	Texture	Permeability	Available water capacity	рН
A1,A2	0 to 22 in	silty clay loam	moderately slow	3.97 to 4.85 in	6.1 to 7.3
Btg 2	22 to 55 in	silty clay	slow	4.30 to 5.29 in	6.1 to 7.3
BCg 5	55 to 80 in	silty clay loam	slow	3.97 to 4.71 in	6.6 to 8.4

Murray County, Minnesota

J2A--La Prairie loam, 0 to 2 percent slopes, occasionally flooded

La Prairie, occasionally flooded

Extent: 80 to 95 percent of the unit

Soil loss tolerance (T factor): 5

Landform(s): flats on flood plains

Wind erodibility group (WEG): 6

Slope gradient: 0 to 2 percent

Wind erodibility index (WEI): 48

Parent material: alluvium

Kw factor (surface layer) .24

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 1

Flooding: occasional

Hydric soil: no

Ponding: none

Hydrologic group: B

Drainage class: moderately well drained Potential for frost action: moderate

Representative	soil profile:	Texture	Permeability	capacity	рН
Ap	0 to 9 in	loam	moderate	1.81 to 1.99 in	6.6 to 8.4
A	9 to 38 in	loam	moderate	5.83 to 6.41 in	6.6 to 8.4
Bw 3	88 to 50 in	loam	moderate	2.01 to 2.24 in	6.6 to 8.4
C 5	60 to 60 in	loam	moderate	1.67 to 1.87 in	7.4 to 8.4

J7A--Sverdrup sandy loam, 0 to 2 percent slopes

Sverdrup

Extent: 70 to 90 percent of the unit

Landform(s): flats on outwash plains

Soil loss tolerance (T factor): 4

Wind erodibility group (WEG): 3

Slope gradient: 0 to 2 percent

Wind erodibility index (WEI): 86

Parent material: outwash

Kw factor (surface layer) .20

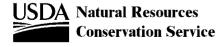
Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 3s

Flooding: none Hydric soil: no
Ponding: none Hydrologic group: B

Drainage class: well drained Potential for frost action: low

Representative	e soil profile:	Texture	Permeability	Available water capacity	рН
Ap,A	0 to 12 in	sandy loam	moderately rapid	1.54 to 1.77 in	6.1 to 7.3
Bw	12 to 26 in	sandy loam	moderately rapid	1.70 to 1.98 in	6.1 to 7.3
2C	26 to 80 in	sand	rapid	2.70 to 3.78 in	7.4 to 8.4



This report shows only the major soils in each map unit

Available water

Murray County, Minnesota

J7B--Sverdrup sandy loam, 2 to 6 percent slopes

Sverdrup

Extent: 80 to 90 percent of the unit

Landform(s): hills on outwash plains

Soil loss tolerance (T factor): 4

Wind erodibility group (WEG): 3

Slope gradient: 2 to 6 percent

Wind erodibility index (WEI): 86

Parent material: outwash

Kw factor (surface layer) .20

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 3e

Flooding: none

Hydric soil: no
Ponding: none

Hydrologic group: B

Drainage class: well drained Potential for frost action: low

Representative	soil profile:	Texture	Permeability	Available water capacity	рН
Ap,A	0 to 12 in	sandy loam	moderately rapid	1.54 to 1.77 in	6.1 to 7.3
Bw 1	2 to 26 in	sandy loam	moderately rapid	1.70 to 1.98 in	6.1 to 7.3
2C 2	6 to 80 in	sand	rapid	2.70 to 3.78 in	7.4 to 8.4

J8A--Egeland sandy loam, 0 to 2 percent slopes

Egeland

Extent: 70 to 90 percent of the unit

Landform(s): flats on outwash plains

Slope gradient: 0 to 2 percent

Parent material: outwash

Restrictive feature(s): greater than 60 inches

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

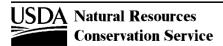
Kw factor (surface layer) .20

Land capability, nonirrigated 3s

Flooding: none Hydric soil: no Ponding: none Hydrologic group: B

Drainage class: well drained Potential for frost action: low

Representative soil profile:	Texture	Permeability	Available water capacity	рН
Ap,A1 0 to 15 in	sandy loam	moderately rapid	1.65 to 2.54 in	6.1 to 7.3
Bw 15 to 40 in	sandy loam	moderately rapid	2.27 to 3.78 in	6.1 to 7.8
Bk 40 to 60 in	sandy loam	moderately rapid	1.77 to 2.95 in	7.4 to 8.4
C 60 to 80 in	loamy sand	moderately rapid	1.61 to 2.01 in	6.6 to 8.4



This report shows only the major soils in each map unit

Tabular Data Version: 10
Tabular Data Version Date: 10/12/2010

Murray County, Minnesota

J8B--Egeland sandy loam, 2 to 6 percent slopes

Egeland

Extent: 70 to 90 percent of the unit Landform(s): hills on outwash plains Slope gradient: 2 to 6 percent

Parent material: outwash

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5 Wind erodibility group (WEG): 3 Wind erodibility index (WEI): 86 Kw factor (surface layer) .20 Land capability, nonirrigated 3e

Hydric soil: no Hydrologic group: B

Potential for frost action: low

Representative	soil profile:	Texture	Permeability	Available water capacity	рН
Ap,A1	0 to 9 in	sandy loam	moderately rapid	1.00 to 1.54 in	6.1 to 7.3
Bw	9 to 26 in	sandy loam	moderately rapid	1.52 to 2.54 in	6.1 to 7.8
Bk 2	26 to 39 in	loamy sand	moderately rapid	1.04 to 1.30 in	6.6 to 8.4
C 3	89 to 80 in	loamy sand	moderately rapid	3.28 to 4.09 in	6.6 to 8.4

Murray County, Minnesota

J11A--Vallers clay loam, 0 to 2 percent slopes

Vallers

Extent: 75 to 95 percent of the unit

Landform(s): rims on depressions on till plains, flats on till

plains, drainageways on till plains

Slope gradient: 0 to 2 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

Drainage class: poorly drained

Soil loss tolerance (T factor): 5 Wind erodibility group (WEG): 4L

Wind erodibility index (WEI): 86 Kw factor (surface layer) .28 Land capability, nonirrigated 2w

Hydric soil: yes

Hydrologic group: B/D

Representative	soil profile:	Texture	Permeability	Available water capacity	рН
Ap,A	0 to 14 in	clay loam	moderate	2.41 to 2.69 in	7.4 to 8.4
Bkg 1	14 to 38 in	loam	moderate	3.60 to 4.56 in	7.4 to 8.4
Cg 3	88 to 80 in	loam	moderately slow	6.26 to 7.93 in	7.4 to 8.4

Murray County, Minnesota

J12A--Marysland loam, 0 to 2 percent slopes

Marysland

Extent: 75 to 95 percent of the unit Soil loss tolera

Landform(s): rims on depressions on outwash plains, flats on

outwash plains, drainageways on outwash plains

Slope gradient: 0 to 2 percent Parent material: outwash

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

Drainage class: poorly drained

Soil loss tolerance (T factor): 4 Wind erodibility group (WEG): 4L

Wind erodibility index (WEI): 86 Kw factor (surface layer) .24 Land capability, nonirrigated 2w

Hydric soil: yes

Hydrologic group: B/D

Representative soil pro	ofile: Texture	Permeability	Available water capacity	рН
Ap 0 to 9 in	n loam	moderate	1.54 to 1.99 in	7.4 to 8.4
Ak 9 to 12 i	in loam	moderate	0.47 to 0.61 in	7.4 to 8.4
Bkg 12 to 27 i	in loam	moderate	2.30 to 2.92 in	7.4 to 8.4
2Cg 27 to 80 i	in gravelly sand	rapid	1.06 to 3.69 in	7.4 to 8.4

Murray County, Minnesota

J17A--Quam silty clay loam, depressional, 0 to 1 percent slopes

Quam, depressional

Extent: 85 to 95 percent of the unit

Landform(s): depressions on lake plains, depressions on

moraines, depressions on till plains

Slope gradient: 0 to 1 percent Parent material: lacustrine deposits

Restrictive feature(s): greater than 60 inches

Flooding: none
Ponding: frequent

Drainage class: very poorly drained

Soil loss tolerance (*T* factor): 5 Wind erodibility group (WEG): 7

Wind erodibility index (WEI): 38

Kw factor (surface layer) .28

Land capability, nonirrigated 3w

Hydric soil: yes

Hydrologic group: B/D

Representativ	e soil profile:	Texture	Permeability	Available water capacity	рН
Ар	0 to 10 in	silty clay loam	moderately slow	1.77 to 2.17 in	6.6 to 7.3
A1,A2	10 to 45 in	silty clay loam	moderately slow	5.61 to 6.66 in	6.6 to 7.3
Cg	45 to 80 in	silty clay loam	moderately slow	5.61 to 6.66 in	6.6 to 7.8

Murray County, Minnesota

J22A--Renshaw loam, 0 to 3 percent slopes

Renshaw

Extent: 75 to 95 percent of the unit

Landform(s): flats on outwash plains

Soil loss tolerance (T factor): 3

Wind erodibility group (WEG): 6

Slope gradient: 0 to 3 percent

Wind erodibility index (WEI): 48

Parent material: outwash

Kw factor (surface layer) .28

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 3s

Flooding: none Hydric soil: no
Ponding: none Hydrologic group: B

Drainage class: somewhat excessively drained Potential for frost action: low

Representative :	soil profile:	Texture	Permeability	Available water capacity	рН
Ap () to 7 in	loam	moderate	1.42 to 1.56 in	6.1 to 7.3
Bw 7	7 to 15 in	loam	moderately rapid	1.34 to 1.50 in	6.6 to 7.3
2Bk 15	5 to 20 in	gravelly loamy sand	very rapid	0.26 to 0.36 in	7.4 to 8.4
2C 20) to 60 in	gravelly loamy sand	very rapid	1.59 to 2.39 in	7.4 to 8.4

J23A--Lamoure silty clay loam, 0 to 2 percent slopes, occasionally flooded

Lamoure, occasionally flooded

Extent: 75 to 95 percent of the unit

Landform(s): flats on flood plains

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 4L

Slope gradient: 0 to 2 percent

Wind erodibility index (WEI): 86

Parent material: alluvium

Kw factor (surface layer) .28

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 2w

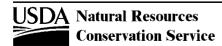
Flooding: occasional

Hydric soil: yes

Ponding: none Hydrologic group: B/D

Drainage class: poorly drained Potential for frost action: high

Representative	e soil profile:	Texture	Permeability	Available water capacity	рН
A1,A2	0 to 27 in	silty clay loam	moderate	4.89 to 5.98 in	7.4 to 8.4
Cg1	27 to 34 in	silty clay loam	moderate	1.07 to 1.27 in	7.4 to 8.4
Cg2	34 to 60 in	silt loam	moderate	5.20 to 5.72 in	7.4 to 8.4



This report shows only the major soils in each map unit

Murray County, Minnesota

J26B--Darnen loam, 2 to 6 percent slopes

Darnen

Extent: 85 to 95 percent of the unit

Landform(s): hills on moraines

Slope gradient: 2 to 6 percent

Parent material: colluvium

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .28
Land capability, nonirrigated 2e

Hydric soil: no Hydrologic group: B

Representative	e soil profile:	Texture	Permeability	Available water capacity	рН
Ap,A	0 to 24 in	loam	moderate	4.80 to 5.28 in	6.6 to 7.3
AB,Bw1 2	24 to 34 in	loam	moderate	1.67 to 1.87 in	6.1 to 7.3
Bw2 3	34 to 80 in	loam	moderate	7.83 to 8.75 in	6.6 to 8.4

Murray County, Minnesota

J31B--Arvilla-Sandberg complex, 2 to 6 percent slopes

Arvilla

Extent: 35 to 55 percent of the unit

Landform(s): hills on outwash plains

Soil loss tolerance (T factor): 3

Wind erodibility group (WEG): 3

Slope gradient: 2 to 6 percent

Wind erodibility index (WEI): 86

Parent material: outwash

Kw factor (surface layer) .20

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 3e

Flooding: none

Hydric soil: no
Ponding: none

Hydrologic group: B

Drainage class: somewhat excessively drained Potential for frost action: low

Representative soil	I profile:	Texture	Permeability	capacity	рН
Ap 0 to	9 in	sandy loam	moderately rapid	1.18 to 1.36 in	6.1 to 7.3
Bw 9 to	14 in	sandy loam	moderately rapid	0.61 to 0.72 in	6.6 to 7.3
2Bk 14 to	48 in	gravelly sand	very rapid	0.68 to 1.69 in	7.4 to 8.4
2C 48 to	80 in	gravelly sand	very rapid	0.64 to 1.59 in	7.4 to 8.4

Sandberg

Extent: 30 to 50 percent of the unit

Landform(s): hills on outwash plains

Soil loss tolerance (T factor): 3

Wind erodibility group (WEG): 3

Slope gradient: 2 to 6 percent

Wind erodibility index (WEI): 86

Parent material: outwash

Kw factor (surface layer) .15

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 4s

Flooding: none

Hydric soil: no

Ponding: none

Hydrologic group: A

Drainage class: excessively drained Potential for frost action: low

Representative	e soil profile:	Texture	Permeability	Available water capacity	рН
Ар	0 to 8 in	gravelly sandy loam	very rapid	0.39 to 1.02 in	6.1 to 7.8
Bk	8 to 32 in	very gravelly sand	very rapid	0.48 to 1.44 in	7.4 to 8.4
C	32 to 80 in	gravelly sand	very rapid	0.96 to 2.88 in	7.4 to 8.4



Available weter

Murray County, Minnesota

J32A--Bigstone silty clay loam, depressional, 0 to 1 percent slopes

Bigstone, depressional

Extent: 70 to 90 percent of the unit

Landform(s): depressions on lake plains, depressions on

moraines, depressions on till plains

Slope gradient: 0 to 1 percent Parent material: lacustrine deposits

Restrictive feature(s): greater than 60 inches

Flooding: none
Ponding: frequent

Drainage class: very poorly drained

Soil loss tolerance (T factor): 5 Wind erodibility group (WEG): 4L

Wind erodibility index (WEI): 86 Kw factor (surface layer) .28 Land capability, nonirrigated 3w

Hydric soil: yes

Hydrologic group: B/D

Representative	e soil profile:	Texture	Permeability	Available water capacity	рН
Ap	0 to 10 in	silty clay loam	moderate	1.77 to 2.17 in	7.4 to 8.4
Α	10 to 30 in	silty clay loam	moderate	3.61 to 4.42 in	7.4 to 8.4
Cg :	30 to 80 in	loam	moderate	7.50 to 9.50 in	7.4 to 8.4

Murray County, Minnesota

J42C--Sandberg-Arvilla complex, 6 to 12 percent slopes

Sandberg

Extent:50 to 70 percent of the unitSoil loss tolerance (T factor):3Landform(s):hills on outwash plainsWind erodibility group (WEG):8Slope gradient:6 to 12 percentWind erodibility index (WEI):0Parent material:outwashKw factor (surface layer).15

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 6s

Flooding: none Hydric soil: no
Ponding: none Hydrologic group: A

Drainage class: excessively drained Potential for frost action: low

Representative soil profile:	Texture	Permeability	capacity	рН
Ap 0 to 10 in	gravelly sandy loam	very rapid	0.49 to 1.28 in	6.1 to 7.8
Bk 10 to 22 in	gravelly sand	very rapid	0.24 to 0.73 in	7.4 to 8.4
C 22 to 80 in	gravelly sand	very rapid	1.16 to 3.47 in	7.4 to 8.4

Arvilla

Extent: 25 to 35 percent of the unit

Landform(s): hills on outwash plains

Soil loss tolerance (T factor): 3

Wind erodibility group (WEG): 3

Slope gradient: 6 to 12 percent

Wind erodibility index (WEI): 86

Parent material: outwash

Kw factor (surface layer) .20

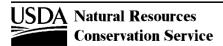
Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 4e

Flooding: none Hydric soil: no
Ponding: none Hydrologic group: B

Drainage class: somewhat excessively drained Potential for frost action: low

Representative soil profile:	Texture	Permeability	Available water capacity	рН
Ap 0 to 9 in	sandy loam	moderately rapid	1.18 to 1.36 in	6.1 to 7.3
Bw 9 to 14 in	sandy loam	moderately rapid	0.61 to 0.72 in	6.6 to 7.3
2Bk 14 to 48 in	gravelly sand	very rapid	0.68 to 1.69 in	7.4 to 8.4
2C 48 to 80 in	gravelly sand	very rapid	0.64 to 1.59 in	7.4 to 8.4



This report shows only the major soils in each map unit

Available water

Murray County, Minnesota

J45F--Sandberg sandy loam, 12 to 40 percent slopes

Sandberg

Extent: 70 to 90 percent of the unit

Landform(s): hills on outwash plains

Soil loss tolerance (T factor): 3

Wind erodibility group (WEG): 3

Slope gradient: 12 to 40 percent

Wind erodibility index (WEI): 86

Parent material: outwash

Kw factor (surface layer) .15

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 7e

Flooding: none Hydric soil: no
Ponding: none Hydrologic group: A

Drainage class: excessively drained Potential for frost action: low

Representative	soil profile:	Texture	Permeability	Available water capacity	рН
A1,A2	0 to 12 in	sandy loam	very rapid	1.54 to 1.77 in	6.1 to 7.8
Bk '	12 to 28 in	gravelly sand	very rapid	0.32 to 0.97 in	7.4 to 8.4
C 2	28 to 80 in	gravelly sand	very rapid	1.04 to 3.12 in	7.4 to 8.4



Murray County, Minnesota

J48A--Bigstone and Parnell soils, ponded, 0 to 1 percent slopes

Bigstone, ponded

Extent: 0 to 85 percent of the unit

Soil loss tolerance (T factor): 5

Landform(s): depressions on moraines, depressions on lake

Wind erodibility group (WEG): 8

Landform(s): depressions on moraines, depressions on lake Wir plains, depressions on till plains

Slope gradient: 0 to 1 percent Wind erodibility index (WEI): 0

Parent material: lacustrine deposits Kw factor (surface layer) .28

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 8w

Flooding: none Hydric soil: yes
Ponding: frequent Hydrologic group: D

Drainage class: very poorly drained Potential for frost action: high

Representative s	oil profile:	Texture	Permeability	Available water capacity	рН
A1 0	to 18 in	silty clay loam	moderate	3.26 to 3.98 in	7.4 to 8.4
A2 18	to 48 in	silty clay loam	moderate	5.39 to 6.58 in	7.4 to 8.4
2Ca 48	to 80 in	loam	moderate	4.78 to 6.06 in	7.4 to 8.4

Parnell, ponded

Extent: 0 to 85 percent of the unit Soil loss tolerance (T factor): 5

Landform(s): depressions on moraines, depressions on lake Wind erodibility group (WEG): 8 plains, depressions on till plains

Slope gradient: 0 to 1 percent Wind erodibility index (WEI): 0

Parent material: till Kw factor (surface layer) .37

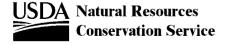
Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 8w

Flooding: none Hydric soil: yes
Ponding: frequent Hydrologic group: D

Drainage class: very poorly drained Potential for frost action: high

Representative soil profil	e: Texture	Permeability	Available water capacity	рН
A1,A2 0 to 22 in	silty clay loam	moderately slow	3.97 to 4.85 in	6.1 to 7.3
Btg 22 to 55 in	silty clay	slow	4.30 to 5.29 in	6.1 to 7.3
BCa 55 to 80 in	silty clay loam	slow	3.97 to 4.71 in	6.6 to 8.4



Murray County, Minnesota

J57A--Balaton loam, 1 to 3 percent slopes

Balaton

Extent: 75 to 95 percent of the unit

Landform(s): knolls on till plains

Slope gradient: 1 to 3 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

Drainage class: moderately well drained

Soil loss tolerance (T factor): 5 Wind erodibility group (WEG): 4L Wind erodibility index (WEI): 86 Kw factor (surface layer) .28 Land capability, nonirrigated 2s

Hydric soil: no Hydrologic group: B

Representative soil profile	Texture	Permeability	Available water capacity	pН
Ap,A 0 to 13 in	loam	moderate	2.60 to 2.86 in	7.4 to 8.4
ABk,Bk 13 to 31 in	loam	moderate	2.72 to 3.44 in	7.4 to 8.4
C 31 to 80 in	loam	moderate	7.32 to 9.28 in	7.4 to 8.4

Murray County, Minnesota

J72B--Renshaw-Sandberg complex, 2 to 6 percent slopes

Renshaw

Extent: 65 to 85 percent of the unit

Landform(s): hills on outwash plains

Soil loss tolerance (T factor): 3

Wind erodibility group (WEG): 6

Slope gradient: 2 to 6 percent

Wind erodibility index (WEI): 48

Parent material: outwash

Kw factor (surface layer) .28

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 3e

Flooding: none

Hydric soil: no
Ponding: none

Hydrologic group: B

Drainage class: somewhat excessively drained Potential for frost action: low

Representative s	oil profile:	Texture	Permeability	capacity	рН
Ap 0	to 7 in	loam	moderate	1.42 to 1.56 in	6.1 to 7.3
Bw 7	to 15 in	loam	moderately rapid	1.34 to 1.50 in	6.6 to 7.3
2Bk 15	to 20 in	gravelly loamy sand	very rapid	0.26 to 0.36 in	7.4 to 8.4
2C 20	to 60 in	gravelly loamy sand	verv rapid	1.59 to 2.39 in	7.4 to 8.4

Sandberg

Extent: 10 to 20 percent of the unit

Landform(s): hills on outwash plains

Soil loss tolerance (T factor): 3

Wind erodibility group (WEG): 3

Slope gradient: 2 to 6 percent

Wind erodibility index (WEI): 86

Parent material: outwash

Kw factor (surface layer) .15

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 4e

Flooding: none

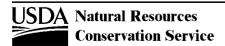
Hydric soil: no

Ponding: none

Hydrologic group: A

Drainage class: excessively drained Potential for frost action: low

Representative soil profile:		Texture	Permeability	Available water capacity	рН
A1,A2	0 to 12 in	sandy loam	very rapid	1.54 to 1.77 in	6.1 to 7.8
Bk	12 to 28 in	gravelly sand	very rapid	0.48 to 0.81 in	7.4 to 8.4
C 2	28 to 80 in	gravelly sand	very rapid	1.56 to 2.60 in	7.4 to 8.4



Available weter

Murray County, Minnesota

J73D2--Buse clay loam, 12 to 18 percent slopes, moderately eroded

Buse, moderately eroded

Extent: 65 to 80 percent of the unit

Landform(s): hills on till plains

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 4L

Slope gradient: 12 to 18 percent

Wind erodibility index (WEI): 86

Parent material: till

Kw factor (surface layer) .24

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 4e

Flooding: none Hydric soil: no
Ponding: none Hydrologic group: B

Drainage class: well drained Potential for frost action: moderate

Representative soil profile:		Texture	Permeability	Available water capacity	рН
Ар	0 to 7 in	clay loam	moderately slow	1.20 to 1.35 in	7.4 to 8.4
ABk,Bk	7 to 22 in	clay loam	moderately slow	2.09 to 2.69 in	7.4 to 8.4
C 2	22 to 60 in	clay loam	moderately slow	5.29 to 6.80 in	7.4 to 8.4

J73F--Buse clay loam, 25 to 40 percent slopes

Buse

Extent: 75 to 85 percent of the unit

Landform(s): hills on till plains

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 4L

Slope gradient: 25 to 40 percent

Wind erodibility index (WEI): 86

Parent material: till

Kw factor (surface layer) .24

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 7e

Flooding: none

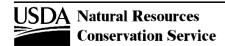
Hydric soil: no

Ponding: none

Hydrologic group: B

Drainage class: well drained Potential for frost action: moderate

Representativ	e soil profile:	Texture	Permeability	Available water capacity	рН
Ар	0 to 7 in	clay loam	moderately slow	1.20 to 1.35 in	7.4 to 8.4
ABk,Bk	7 to 22 in	clay loam	moderately slow	2.09 to 2.69 in	7.4 to 8.4
C	22 to 60 in	clay loam	moderately slow	5.29 to 6.80 in	7.4 to 8.4



This report shows only the major soils in each map unit

Tabular Data Version: 10
Tabular Data Version Date: 10/12/2010

Murray County, Minnesota

J75A--Fordville loam, 0 to 2 percent slopes

Fordville

Extent: 80 to 90 percent of the unit

Landform(s): flats on outwash plains

Soil loss tolerance (T factor): 3

Wind erodibility group (WEG): 6

Slope gradient: 0 to 2 percent

Wind erodibility index (WEI): 48

Parent material: outwash

Kw factor (surface layer) .24

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 2s

Hydric soil: no

Flooding: none Hydric soil: no
Ponding: none Hydrologic group: B

Drainage class: well drained Potential for frost action: low

Representative soil p	orofile:	Texture	Permeability	Available water capacity	рН
Ap 0 to 6	in loam		moderate	1.18 to 1.30 in	6.1 to 7.3
Bw 6 to 2	24 in loam		moderate	3.08 to 3.44 in	6.1 to 7.3
2C 24 to 8	30 in gravelly loamy	/ sand	very rapid	2.24 to 3.35 in	7.4 to 8.4

J75B--Fordville loam, 2 to 6 percent slopes

Fordville

Extent: 80 to 90 percent of the unit

Landform(s): hills on outwash plains

Wind erodibility group (WEG): 6

Slope gradient: 2 to 6 percent

Wind erodibility index (WEI): 48

Parent material: outwash

Kw factor (surface layer) .24

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 2e

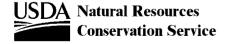
Flooding: none

Hydric soil: no
Ponding: none

Hydrologic group: B

Drainage class: well drained Potential for frost action: low

Representative soil p	orofile:	Texture	Permeability	Available water capacity	рН
Ap 0 to 6	in loam		moderate	1.18 to 1.30 in	6.1 to 7.3
Bw 6 to 2	24 in loam		moderate	3.08 to 3.44 in	6.1 to 7.3
2C 24 to 8	30 in gravelly loan	ny sand	very rapid	2.24 to 3.35 in	7.4 to 8.4



This report shows only the major soils in each map unit

Murray County, Minnesota

J77A--Lamoure silty clay loam, 0 to 2 percent slopes, frequently flooded

Lamoure, frequently flooded

Extent: 75 to 95 percent of the unit

Landform(s): flats on flood plains

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 4L

Slope gradient: 0 to 2 percent

Wind erodibility index (WEI): 86

Parent material: alluvium

Kw factor (surface layer) .28

Restrictive feature(s): greater than 60 inches Land capability, nonirrigated 5w

Flooding: frequent Hydric soil: yes
Ponding: none Hydrologic group: B/D

Drainage class: poorly drained Potential for frost action: high

Representative soil p	orofile:	Texture	Permeability	Available water capacity	рН
A1,A2 0 to 2	27 in silty clay loar	m	moderate	4.89 to 5.98 in	7.4 to 8.4
Cg1 27 to 3	34 in silty clay loar	m	moderate	1.07 to 1.27 in	7.4 to 8.4
Cg2 34 to 6	60 in silt loam		moderate	5.20 to 5.72 in	7.4 to 8.4



Murray County, Minnesota

J78A--Lismore silty clay loam, 1 to 3 percent slopes

Lismore

Extent: 65 to 85 percent of the unit

Soil loss tolerance (T factor): 5

Landform(s): hills on till plains

Wind erodibility group (WEG): 7

Slope gradient: 1 to 3 percent

Wind erodibility index (WEI): 38

Parent material: loess over till

Kw factor (surface layer) .28

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 1

Flooding: none Hydric soil: no
Ponding: none Hydrologic group: B

Drainage class: moderately well drained Potential for frost action: moderate

Representativ	/e soil profile:	Texture	Permeability	Available water capacity	рН
Ар	0 to 8 in	silty clay loam	moderate	1.42 to 1.73 in	6.1 to 7.3
A	8 to 17 in	silty clay loam	moderate	1.63 to 1.99 in	6.1 to 7.3
2Bw1,2Bw2	17 to 32 in	clay loam	moderately slow	2.24 to 2.84 in	6.1 to 7.3
2Bk	32 to 48 in	clay loam	moderately slow	2.26 to 2.91 in	7.4 to 8.4
2C	48 to 60 in	clay loam	moderately slow	1.65 to 2.13 in	7.4 to 8.4



Murray County, Minnesota

J79B--Vienna-Brookings complex, 1 to 4 percent slopes

Vienna, occasional saturation

Extent: 45 to 65 percent of the unit

Landform(s): hills on till plains

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 7

Slope gradient: 1 to 4 percent

Wind erodibility index (WEI): 38

Parent material: loess over till

Kw factor (surface layer) .28

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 2e

Flooding: none Hydric soil: no
Ponding: none Hydrologic group: B

Drainage class: well drained Potential for frost action: moderate

Representative soil prof	ile: Texture	Permeability	Available water capacity	рН
Ap 0 to 10 ir	silty clay loam	moderate	1.77 to 2.17 in	6.1 to 7.3
Bw 10 to 15 ir	n silty clay loam	moderate	0.82 to 0.97 in	6.1 to 7.3
2Bw 15 to 23 ir	n clay loam	moderately slow	1.10 to 1.42 in	6.1 to 7.3
2Bk,2C 23 to 60 ir	n clay loam	moderately slow	5.18 to 6.66 in	7.4 to 8.4

Brookings

Extent: 25 to 45 percent of the unit

Landform(s): hills on till plains

Wind erodibility group (WEG): 7

Slope gradient: 1 to 4 percent

Wind erodibility index (WEI): 38

Parent material: loess over till

Restrictive feature(s): greater than 60 inches

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 7

Wind erodibility index (WEI): 38

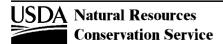
Kw factor (surface layer) .28

Land capability, nonirrigated 1

Flooding: none Hydric soil: no
Ponding: none Hydrologic group: B

Drainage class: moderately well drained Potential for frost action: high

Representativ	e soil profile:	Texture	Permeability	capacity	рН
Ap	0 to 9 in	silty clay loam	moderate	1.63 to 1.99 in	6.1 to 7.3
Bw1,Bw2,Bw3	9 to 30 in	silty clay loam	moderate	3.34 to 3.96 in	6.6 to 7.3
2BC.2C	30 to 60 in	clav loam	moderately slow	4.19 to 5.39 in	7.4 to 8.4



This report shows only the major soils in each map unit

Accessors to the constraint

Murray County, Minnesota

J81C2--Renshaw-Barnes complex, 6 to 12 percent slopes, moderately eroded

Renshaw, moderately eroded

Extent:60 to 80 percent of the unitSoil loss tolerance (T factor):3Landform(s):hills on outwash plainsWind erodibility group (WEG):6Slope gradient:6 to 12 percentWind erodibility index (WEI):48Parent material:outwashKw factor (surface layer).28

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 4e

Flooding: none Hydric soil: no
Ponding: none Hydrologic group: B

Drainage class: somewhat excessively drained Potential for frost action: low

Representative soil profile	e: Texture	Permeability	capacity	рН
Ap 0 to 7 in	loam	moderate	1.42 to 1.56 in	6.1 to 7.3
Bw 7 to 15 in	loam	moderately rapid	1.34 to 1.50 in	6.6 to 7.3
2Bk 15 to 20 in	gravelly loamy sand	very rapid	0.26 to 0.36 in	7.4 to 8.4
2C 20 to 60 in	gravelly loamy sand	verv rapid	1.59 to 2.39 in	7.4 to 8.4

Barnes, moderately eroded

Extent: 10 to 30 percent of the unit

Landform(s): hills on outwash plains

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 6

Slope gradient: 6 to 12 percent

Wind erodibility index (WEI): 48

Parent material: till

Kw factor (surface layer) .24

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 3e

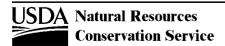
Flooding: none

Hydric soil: no

Ponding: none Hydrologic group: B

Drainage class: well drained Potential for frost action: moderate

Representative soil profile:	Texture	Permeability	Available water capacity	рН
Ap 0 to 11 in	clay loam	moderately slow	1.87 to 2.09 in	6.1 to 7.3
Bw 11 to 17 in	clay loam	moderately slow	0.89 to 1.12 in	6.1 to 7.3
Bk 17 to 31 in	clay loam	moderately slow	1.93 to 2.48 in	7.4 to 8.4
BC 31 to 60 in	clay loam	moderately slow	4.08 to 5.24 in	7.4 to 8.4



This report shows only the major soils in each map unit

Available water

Murray County, Minnesota

J83F--Sandberg-Buse-Everts complex, 12 to 40 percent slopes

Sandberg

Extent: 45 to 65 percent of the unit Landform(s): hills on outwash plains Slope gradient: 12 to 40 percent

Parent material: outwash

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

Drainage class: excessively drained

Soil loss tolerance (T factor): 3
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Kw factor (surface layer) .15
Land capability, nonirrigated 7e

Hydric soil: no Hydrologic group: A

Potential for frost action: low

Available weter

Representative s	soil profile:	Texture	Permeability	capacity	рН
A1,A2 0	to 12 in	sandy loam	very rapid	1.54 to 1.77 in	6.1 to 7.8
Bk 12	to 28 in	gravelly sand	very rapid	0.48 to 0.81 in	7.4 to 8.4
C 28	to 80 in	gravelly sand	very rapid	1.56 to 2.60 in	7.4 to 8.4

Buse

Extent: 15 to 35 percent of the unit Landform(s): hills on outwash plains Slope gradient: 12 to 40 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated 7e

Hydrologic group: B

Representativ	e soil profile:	Texture	Permeability	Available water capacity	рН
Ap	0 to 7 in	clay loam	moderately slow	1.20 to 1.35 in	7.4 to 8.4
ABk,Bk	7 to 22 in	clay loam	moderately slow	2.09 to 2.69 in	7.4 to 8.4
C	22 to 60 in	clay loam	moderately slow	5.29 to 6.80 in	7.4 to 8.4



Murray County, Minnesota

J83F--Sandberg-Buse-Everts complex, 12 to 40 percent slopes

Everts

Extent: 10 to 20 percent of the unit

Landform(s): hills on outwash plains

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 6

Slope gradient: 12 to 40 percent

Wind erodibility index (WEI): 48

Parent material: colluvium

Kw factor (surface layer) .24

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 4e

Flooding: none

Hydric soil: no

Ponding: none

Hydrologic group: B

Drainage class: well drained Potential for frost action: moderate

Representative	soil profile:	Texture	Permeability	Available water capacity	рН
Ap,AB	0 to 38 in	loam	moderate	7.64 to 8.40 in	6.6 to 7.3
Bw 3	88 to 54 in	loam	moderate	2.68 to 2.99 in	6.1 to 7.3
2C 5	64 to 80 in	very gravelly coarse sand	very rapid	0.52 to 1.04 in	7.4 to 8.4

J85A--Trosky silty clay loam, 0 to 2 percent slopes

Trosky

Extent: 85 to 95 percent of the unit

Soil loss tolerance (T factor): 4

Landform(s): drainageways on outwash plains, flats on

Wind erodibility group (WEG): 4L

Landform(s): drainageways on outwash plains, flats on outwash plains

Slope gradient: 0 to 2 percent

Wind erodibility index (WEI): 86

Parent material: loess over outwash

Kw factor (surface layer) .28

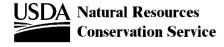
Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 2w

Flooding: none Hydric soil: yes
Ponding: none Hydrologic group: B/D

Drainage class: poorly drained Potential for frost action: high

Representativ	e soil profile:	Texture Permeability Available water capacity		рН	
Ap,A,AB	0 to 20 in	silty clay loam	moderate	3.61 to 4.42 in	7.4 to 8.4
Bkg1,Bkg2	20 to 38 in	silty clay loam	moderate	2.90 to 3.44 in	7.4 to 8.4
2Cg	38 to 60 in	gravelly coarse sand	rapid	0.87 to 1.30 in	7.4 to 8.4



This report shows only the major soils in each map unit

Murray County, Minnesota

J86B--Vienna silty clay loam, 3 to 6 percent slopes

Vienna, occasional saturation

Extent: 80 to 90 percent of the unit Landform(s): hills on till plains

Slope gradient: 3 to 6 percent

Parent material: loess over till

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5 Wind erodibility group (WEG): 7 Wind erodibility index (WEI): 38 Kw factor (surface layer) .28 Land capability, nonirrigated 2e

Hydric soil: no Hydrologic group: B

Representative soil profile:	Texture	Permeability	Available water capacity	рН
Ap 0 to 10 in	silty clay loam	moderate	1.77 to 2.17 in	6.1 to 7.3
Bw 10 to 15 in	silty clay loam	moderate	0.82 to 0.97 in	6.1 to 7.3
2Bw 15 to 23 in	clay loam	moderately slow	1.10 to 1.42 in	6.1 to 7.3
2Bk,2C 23 to 60 in	clay loam	moderately slow	5.18 to 6.66 in	7.4 to 8.4



Murray County, Minnesota

J90B--Kranzburg-Brookings complex, 1 to 4 percent slopes

Kranzburg, occasional saturation

Extent: 45 to 65 percent of the unit

Landform(s): hills on till plains

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 7

Slope gradient: 1 to 4 percent

Wind erodibility index (WEI): 38

Parent material: loess over till

Kw factor (surface layer) .28

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 2e

Flooding: none

Hydric soil: no

Ponding: none

Hydrologic group: B

Drainage class: well drained Potential for frost action: high

Representative	e soil profile:	Texture	Permeability	Available water capacity	рН
Ap	0 to 9 in	silty clay loam	moderate	1.63 to 1.99 in	6.1 to 7.3
Bw1,Bw2	9 to 25 in	silty clay loam	moderate	2.58 to 3.07 in	6.6 to 7.3
2Bk	25 to 57 in	clay loam	moderately slow	4.46 to 5.74 in	7.4 to 8.4
2C	57 to 60 in	clay loam	moderately slow	0.39 to 0.50 in	7.4 to 8.4

Brookings

Extent: 25 to 45 percent of the unit

Soil loss tolerance (T factor): 5

Landform(s): hills on till plains

Wind erodibility group (WEG): 7

Slope gradient: 1 to 4 percent

Wind erodibility index (WEI): 38

Parent material: loess over till

Kw factor (surface layer) .28

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 1

Flooding: noneHydric soil: noPonding: noneHydrologic group: B

Drainage class: moderately well drained Potential for frost action: high

Representativ	e soil profile:	Texture	Permeability	capacity	рН
Ap	0 to 9 in	silty clay loam	moderate	1.63 to 1.99 in	6.1 to 7.3
Bw1,Bw2,Bw3	9 to 30 in	silty clay loam	moderate	3.34 to 3.96 in	6.6 to 7.3
2BC.2C	30 to 60 in	clav loam	moderately slow	4.19 to 5.39 in	7.4 to 8.4



This report shows only the major soils in each map unit

Accessors to the constraint

Murray County, Minnesota

J91B--Darnen loam, stratified substratum, 2 to 6 percent slopes

Darnen, stratified substratum

Extent: 85 to 95 percent of the unit

Soil loss tolerance (T factor): 5

Landform(s): hills on moraines

Wind erodibility group (WEG): 6

Slope gradient: 2 to 6 percent

Wind erodibility index (WEI): 48

Parent material: colluvium

Kw factor (surface layer) .24

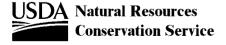
Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 2e

Flooding: none Hydric soil: no
Ponding: none Hydrologic group: B

Drainage class: well drained Potential for frost action: moderate

Representative	soil profile:		Texture	Permeability	Available water capacity	рН
Ap,A1,A2	0 to 30 in	loam		moderate	5.98 to 6.58 in	6.6 to 7.3
Bk1,Bk2 3	30 to 62 in	loam		moderate	5.42 to 6.06 in	7.4 to 8.4
C1 6	62 to 74 in	loamy sand		moderately rapid	0.98 to 1.59 in	7.4 to 8.4
C2 7	74 to 80 in	clay loam		moderately slow	0.77 to 1.12 in	7.4 to 8.4



Murray County, Minnesota

J92C2--Buse-Vienna complex, 6 to 12 percent slopes, moderately eroded

Buse, moderately eroded

Extent: 45 to 55 percent of the unit Landform(s): hills on till plains Slope gradient: 6 to 12 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5 Wind erodibility group (WEG): 4L Wind erodibility index (WEI): 86 Kw factor (surface layer) .24 Land capability, nonirrigated 3e

Hydric soil: no Hydrologic group: B

Potential for frost action: moderate

Available water

Representativ	ve soil profile:	Texture	Permeability	capacity	рН
Ap	0 to 7 in	clay loam	moderately slow	1.20 to 1.35 in	7.4 to 8.4
ABk,Bk	7 to 22 in	clay loam	moderately slow	2.09 to 2.69 in	7.4 to 8.4
C	22 to 60 in	clay loam	moderately slow	5.29 to 6.80 in	7.4 to 8.4

Vienna, moderately eroded

Extent: 15 to 25 percent of the unit Landform(s): hills on till plains Slope gradient: 6 to 12 percent

Parent material: loess over till

Restrictive feature(s): greater than 60 inches

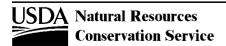
Flooding: none Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 7
Wind erodibility index (WEI): 38
Kw factor (surface layer) .28
Land capability, nonirrigated 3e

Hydric soil: no Hydrologic group: B

Representative	soil profile:	Texture	Permeability	Available water capacity	рН
Ар	0 to 10 in	silty clay loam	moderate	1.77 to 2.17 in	6.1 to 7.3
Bw ′	10 to 15 in	silty clay loam	moderate	0.82 to 0.97 in	6.1 to 7.3
2Bw ′	15 to 23 in	clay loam	moderately slow	1.10 to 1.42 in	6.1 to 7.3
2Bk,2C 2	23 to 60 in	clay loam	moderately slow	5.18 to 6.66 in	7.4 to 8.4



Murray County, Minnesota

J93A--Hidewood-Badger complex, 0 to 2 percent slopes

Hidewood

Extent: 40 to 60 percent of the unit

Landform(s): flats on till plains, drainageways on till plains

Slope gradient: 0 to 2 percent Parent material: loess over till

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

Drainage class: poorly drained

Soil loss tolerance (T factor): 5 Wind erodibility group (WEG): 4L Wind erodibility index (WEI): 86

Kw factor (surface layer) .28 Land capability, nonirrigated 2w

Hydric soil: yes

Hydrologic group: B/D

Potential for frost action: high

Representative so	oil profile:	Texture	Permeability	Available water capacity	рН
Ap 0	to 8 in	silty clay loam	moderate	1.42 to 1.73 in	7.4 to 8.4
A 8	to 27 in	silty clay loam	moderate	3.47 to 4.24 in	7.4 to 8.4
Cg 27	to 42 in	silty clay loam	moderate	2.39 to 2.84 in	7.4 to 8.4
2Cg 42	to 80 in	clay loam	moderately slow	5.29 to 6.80 in	7.4 to 8.4

Badger

Extent: 20 to 40 percent of the unit Soil loss tolerance (T factor): 5

Landform(s): drainageways on till plains Wind erodibility group (WEG): 7

Slope gradient: 0 to 2 percent

Wind erodibility index (WEI): 38

Parent material: loess over till

Kw factor (surface layer) .37

Restrictive feature(s): greater than 60 inches Land capability, nonirrigated 2w

Flooding: none Hydric soil: no
Ponding: none Hydrologic group: C

Drainage class: somewhat poorly drained Potential for frost action: high

Representative soil profile	Texture	Permeability	Available water capacity	рН
Ap 0 to 9 in	silty clay loam	moderately slow	1.63 to 1.99 in	6.1 to 7.3
Bt1,Bt2 9 to 35 in	silty clay	slow	3.38 to 4.16 in	6.1 to 7.3
BCg,Cg 35 to 55 in	silty clay loam	moderately slow	3.21 to 3.81 in	6.6 to 8.4
2Cg 55 to 60 in	clay loam	moderately slow	0.66 to 0.76 in	7.4 to 8.4



This report shows only the major soils in each map unit

Murray County, Minnesota

J95F--Buse, stony-Wilno complex, 25 to 40 percent slopes

Buse, stony

Extent: 65 to 85 percent of the unit Landform(s): hills on moraines Slope gradient: 25 to 40 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5 Wind erodibility group (WEG): 4L Wind erodibility index (WEI): 86 Kw factor (surface layer) .28 Land capability, nonirrigated 7e

Hydric soil: no Hydrologic group: B

Potential for frost action: moderate

Available water

Representative soil pro	ofile:	Texture	Permeability	capacity	рН
A 0 to 8 ir	n loam		moderate	1.57 to 1.73 in	7.4 to 8.4
Bk 8 to 37	in loam		moderate	4.37 to 5.54 in	7.4 to 8.4
C 37 to 80	in loam		moderately slow	6.44 to 8.15 in	7.4 to 8.4

Wilno

Extent: 10 to 20 percent of the unit Landform(s): hills on moraines Slope gradient: 25 to 40 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

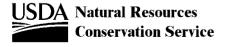
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .28
Land capability, nonirrigated 7e

Hydrologic group: B

Hydric soil: no

Representativ	e soil profile:	Texture	Permeability	Available water capacity	рН
A	0 to 42 in	loam	moderate	8.43 to 9.27 in	6.1 to 7.3
AB	42 to 52 in	loam	moderate	1.67 to 1.87 in	6.1 to 7.3
Bw1,Bw2	52 to 80 in	loam	moderate	4.75 to 5.31 in	6.1 to 7.3



Murray County, Minnesota

J96B--Barnes-Buse complex, 3 to 6 percent slopes

Barnes, occasional saturation

Extent: 55 to 75 percent of the unit

Landform(s): hills on moraines, hills on till plains

Slope gradient: 3 to 6 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5 Wind erodibility group (WEG): 6 Wind erodibility index (WEI): 48 Kw factor (surface layer) .28 Land capability, nonirrigated 2e

Hydric soil: no Hydrologic group: B

Potential for frost action: moderate

Representative	soil profile:	Texture	Permeability	Available water capacity	рН
Ap,A	0 to 11 in	loam	moderate	2.20 to 2.43 in	6.1 to 7.3
Bw 1	1 to 26 in	loam	moderate	2.54 to 2.84 in	6.1 to 7.3
Bk 2	6 to 44 in	loam	moderate	2.72 to 3.44 in	7.4 to 8.4
C 4	4 to 80 in	loam	moderately slow	5.37 to 6.81 in	7.4 to 8.4

Buse

Extent: 10 to 20 percent of the unit

Landform(s): hills on moraines, hills on till plains

Slope gradient: 3 to 6 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

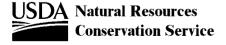
Drainage class: well drained

Soil loss tolerance (T factor): 5 Wind erodibility group (WEG): 4L Wind erodibility index (WEI): 86

Kw factor (surface layer) .28
Land capability, nonirrigated 2e

Hydric soil: no Hydrologic group: B

Representative	e soil profile:	Texture	Pe	ermeability	Available water capacity	рН
Ap	0 to 8 in	loam		moderate	1.57 to 1.73 in	7.4 to 8.4
Bk	8 to 40 in	loam		moderate	4.84 to 6.13 in	7.4 to 8.4
C 4	40 to 60 in	loam	mo	derately slow	2.95 to 3.74 in	7.4 to 8.4



Murray County, Minnesota

J96C2--Barnes-Buse complex, 6 to 12 percent slopes, moderately eroded

Barnes, moderately eroded

Extent: 40 to 60 percent of the unit Landform(s): hills on moraines Slope gradient: 6 to 12 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .28
Land capability, nonirrigated 3e

Hydric soil: no Hydrologic group: B

Potential for frost action: moderate

Representative	soil	profile:		Texture	Permeability	Available water capacity	рН
Ap	0 to	7 in	loam		moderate	1.42 to 1.56 in	6.1 to 7.3
Bw1,Bw2	7 to	19 in	loam		moderate	2.01 to 2.24 in	6.1 to 7.3
Bk 1	9 to	37 in	loam		moderate	2.72 to 3.44 in	7.4 to 8.4
C 3	37 to	60 in	loam		moderately slow	3.43 to 4.34 in	7.4 to 8.4

Buse, moderately eroded

Extent: 20 to 40 percent of the unit Landform(s): hills on moraines Slope gradient: 6 to 12 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

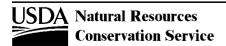
Drainage class: well drained

Soil loss tolerance (T factor): 5 Wind erodibility group (WEG): 4L

Wind erodibility index (WEI): 86
Kw factor (surface layer) .28
Land capability, nonirrigated 3e

Hydric soil: no Hydrologic group: B

Representative	e soil profile:	Texture	Permeability	Available water capacity	рН
Ap	0 to 8 in	loam	moderate	1.57 to 1.73 in	7.4 to 8.4
Bk1,Bk2	8 to 40 in	loam	moderate	4.84 to 6.13 in	7.4 to 8.4
C	40 to 60 in	loam	moderately slow	2.95 to 3.74 in	7.4 to 8.4



Murray County, Minnesota

J99A--Lakepark clay loam, 0 to 3 percent slopes, overwash

Lakepark, overwash

Extent: 75 to 95 percent of the unit

Soil loss tolerance (T factor): 5

Landform(s): drainageways on moraines

Wind erodibility group (WEG): 6

Slope gradient: 0 to 3 percent Wind erodibility index (WEI): 48

Parent material: till Kw factor (surface layer) .24
Restrictive feature(s): greater than 60 inches Land capability, nonirrigated 2w

Flooding: none

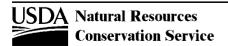
Hydric soil: no

Ponding: none

Hydrologic group: B/D

Drainage class: somewhat poorly drained Potential for frost action: high

Representativ	e soil profile:	Texture	Permeability	Available water capacity	рН
Ap	0 to 8 in	clay loam	moderate	1.34 to 1.50 in	6.1 to 7.3
A	8 to 40 in	clay loam	moderate	5.49 to 6.13 in	6.1 to 7.3
Bg	40 to 60 in	clay loam	moderate	2.95 to 3.74 in	6.6 to 7.3
Cg	60 to 80 in	loam	moderately slow	3.01 to 3.81 in	7.4 to 8.4



Murray County, Minnesota

J100D2--Buse, eroded-Wilno complex, 12 to 18 percent slopes

Buse, moderately eroded

Extent: 60 to 80 percent of the unit Landform(s): hills on moraines Slope gradient: 12 to 18 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5 Wind erodibility group (WEG): 4L Wind erodibility index (WEI): 86 Kw factor (surface layer) .28 Land capability, nonirrigated 4e

Hydric soil: no Hydrologic group: B

Potential for frost action: moderate

Available water

Representative soil profile:		Texture	Permeability	capacity	рН
Ap	0 to 8 in	loam	moderate	1.57 to 1.73 in	7.4 to 8.4
Bk1,Bk2	8 to 40 in	loam	moderate	4.84 to 6.13 in	7.4 to 8.4
C	40 to 60 in	loam	moderately slow	2.95 to 3.74 in	7.4 to 8.4

Wilno

Extent: 10 to 20 percent of the unit

Landform(s): hills on moraines

Slope gradient: 12 to 18 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

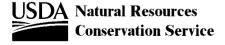
Flooding: none Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .28
Land capability, nonirrigated 4e

Hydric soil: no Hydrologic group: B

Representative soil profile:		Texture	Permeability	Available water capacity	рН
Ар,А	0 to 42 in	loam	moderate	8.43 to 9.27 in	6.1 to 7.3
AB	42 to 52 in	loam	moderate	1.67 to 1.87 in	6.1 to 7.3
Bw1,Bw2	52 to 80 in	loam	moderate	4.75 to 5.31 in	6.1 to 7.3



Murray County, Minnesota

J101B--Hokans-Svea complex, 1 to 4 percent slopes

Hokans

Extent: 60 to 80 percent of the unit

Landform(s): hills on moraines

Slope gradient: 1 to 4 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .28
Land capability, nonirrigated 2e

Hydric soil: no Hydrologic group: B

Potential for frost action: moderate

Representative soil p	profile:	Texture	Permeability	Available water capacity	рН
Ap,A 0 to 1	5 in loam		moderate	2.99 to 3.29 in	6.1 to 7.3
Bw 15 to 2	22 in loam		moderate	1.20 to 1.35 in	6.1 to 7.3
Bk 22 to 4	10 in loam		moderate	2.72 to 3.44 in	7.4 to 8.4
C 40 to 8	0 in loam		moderately slow	5.96 to 7.56 in	7.4 to 8.4

Svea

Extent: 15 to 25 percent of the unit

Landform(s): swales on moraines, flats on moraines

Slope gradient: 1 to 3 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

Drainage class: moderately well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6

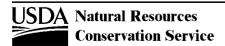
Wind erodibility index (WEI): 48
Kw factor (surface layer) .28

Land capability, nonirrigated 1 Hydric soil: no

Hydrologic group: B

Potential for frost action: moderate

Representative soil profile:		Texture	Permeability	Available water capacity	рН
Ap,A 0 to	o 10 in	loam	moderate	1.97 to 2.17 in	6.1 to 7.3
Bw 10 to	o 21 in	loam	moderate	1.87 to 2.09 in	6.6 to 7.3
Bk 21 to	o 36 in	clay loam	moderate	2.24 to 2.84 in	7.4 to 8.4
C 36 to	o 60 in	loam	moderately slow	3.60 to 4.56 in	7.4 to 8.4



This report shows only the major soils in each map unit

Murray County, Minnesota

J104A--Svea loam, 1 to 3 percent slopes

Svea

Extent: 65 to 85 percent of the unit

Landform(s): swales on moraines, flats on moraines

Slope gradient: 1 to 3 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

Drainage class: moderately well drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 6

Wind erodibility index (WEI): 48

Kw factor (surface layer) .28

Land capability, nonirrigated 1

Hydric soil: no

Hydrologic group: B

Potential for frost action: moderate

Representative	soil profile:	Texture	Permeability	Available water capacity	рН
Ap,A	0 to 10 in	loam	moderate	1.97 to 2.17 in	6.1 to 7.3
Bw 1	0 to 21 in	loam	moderate	1.87 to 2.09 in	6.6 to 7.3
Bk 2	21 to 36 in	clay loam	moderate	2.24 to 2.84 in	7.4 to 8.4
C 3	36 to 60 in	loam	moderately slow	3.60 to 4.56 in	7.4 to 8.4

Murray County, Minnesota

J105A--Arvilla sandy loam, 0 to 2 percent slopes

Arvilla

Extent: 75 to 95 percent of the unit Landform(s): flats on outwash plains Slope gradient: 0 to 2 percent

Parent material: outwash

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

Drainage class: somewhat excessively drained

Soil loss tolerance (T factor): 3
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Kw factor (surface layer) .20
Land capability, nonirrigated 3s

Hydric soil: no Hydrologic group: B

Potential for frost action: low

Representative soil profile:	Texture	Permeability	Available water capacity	рН
Ap 0 to 9 in	sandy loam	moderately rapid	1.18 to 1.36 in	6.1 to 7.3
Bw 9 to 14 in	sandy loam	moderately rapid	0.61 to 0.72 in	6.6 to 7.3
2Bk 14 to 48 in	gravelly sand	very rapid	0.68 to 1.69 in	7.4 to 8.4
2C 48 to 80 in	gravelly sand	very rapid	0.64 to 1.59 in	7.4 to 8.4

Murray County, Minnesota

J106B--Barnes-Buse-Svea complex, 1 to 6 percent slopes

Barnes, occasional saturation

Extent: 50 to 70 percent of the unit

Soil loss tolerance (T factor): 5

Landform(s): hills on moraines, hills on till plains

Wind erodibility group (WEG): 6

Stopp gradient: 3 to 6 persont

Slope gradient: 3 to 6 percent Wind erodibility index (WEI): 48

Parent material: till Kw factor (surface layer) .28

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 2e

Flooding: none

Hydric soil: no

Ponding: none Hydrologic group: B

Drainage class: well drained Potential for frost action: moderate

Representative soil profile	: Texture	Permeability	Available water capacity	рН
Ap,A 0 to 11 in	loam	moderate	2.20 to 2.43 in	6.1 to 7.3
Bw 11 to 26 in	loam	moderate	2.54 to 2.84 in	6.1 to 7.3
Bk 26 to 44 in	loam	moderate	2.72 to 3.44 in	7.4 to 8.4
C 44 to 80 in	loam	moderately slow	5.37 to 6.81 in	7.4 to 8.4

Buse

Extent: 10 to 20 percent of the unit Soil loss tolerance (T factor): 5

Landform(s): hills on moraines, hills on till plains Wind erodibility group (WEG): 4L

Slope gradient: 3 to 6 percent Wind erodibility index (WEI): 86

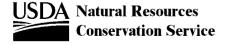
Parent material: till Kw factor (surface layer) .28
Restrictive feature(s): greater than 60 inches Land capability, nonirrigated 2e

Flooding: none Hydric soil: no

Ponding: none Hydrologic group: B

Drainage class: well drained Potential for frost action: moderate

Representative	e soil profile:	Texture	Permeability	Available water capacity	рН
Ap	0 to 8 in	loam	moderate	1.57 to 1.73 in	7.4 to 8.4
Bk1,Bk2	8 to 40 in	loam	moderate	4.84 to 6.13 in	7.4 to 8.4
C	40 to 60 in	loam	moderately slow	2.95 to 3.74 in	7.4 to 8.4



Murray County, Minnesota

J106B--Barnes-Buse-Svea complex, 1 to 6 percent slopes

Svea

Extent: 10 to 20 percent of the unit

Landform(s): swales on moraines, flats on moraines, swales

on till plains, flats on till plains

Slope gradient: 1 to 3 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

Drainage class: moderately well drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 6

Wind erodibility index (WEI): 48
Kw factor (surface layer) .28
Land capability, nonirrigated 1

Hydric soil: no Hydrologic group: B

Potential for frost action: moderate

Representative so	il profile:	Texture	Permeability	Available water capacity	рН
Ap,A 0 to	10 in	loam	moderate	1.97 to 2.17 in	6.1 to 7.3
Bw 10 to	21 in	loam	moderate	1.87 to 2.09 in	6.6 to 7.3
Bk 21 to	36 in	clay loam	moderate	2.24 to 2.84 in	7.4 to 8.4
C 36 to	60 in	loam	moderately slow	3.60 to 4.56 in	7.4 to 8.4

Murray County, Minnesota

J107A--Lakepark-Roliss-Parnell, depressional, complex, 0 to 3 percent slopes

Lakepark

Extent: 30 to 40 percent of the unit

Soil loss tolerance (T factor): 5

Landform(s): drainageways on moraines

Wind erodibility group (WEG): 6

Slope gradient: 0 to 3 percent Wind erodibility index (WEI): 48

Parent material: till Kw factor (surface layer) .24
Restrictive feature(s): greater than 60 inches Land capability, nonirrigated 2w

Flooding: none

Hydric soil: yes

Ponding: none Hydrologic group: B/D

Drainage class: poorly drained Potential for frost action: high

Representative soil profile	e: Te	exture	Permeability	Available water capacity	рН
Ap 0 to 8 in	loam		moderate	1.57 to 1.73 in	6.1 to 7.3
A 8 to 27 in	loam		moderate	3.86 to 4.24 in	6.1 to 7.3
Bg 27 to 41 in	loam		moderate	2.34 to 2.62 in	6.6 to 7.3
Cg 41 to 80 in	loam		moderately slow	5.85 to 7.41 in	7.4 to 8.4

Roliss

Extent: 20 to 30 percent of the unit Soil loss tolerance (T factor): 5

Landform(s): drainageways on moraines, flats on moraines, Wind erodibility group (WEG): 4L

rims on moraines

Slope gradient: 0 to 2 percent Wind erodibility index (WEI): 86

Parent material: till Kw factor (surface layer) .32

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 2w

Flooding: none

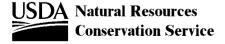
Hydric soil: yes

Ponding: none

Hydrologic group: B/D

Drainage class: poorly drained Potential for frost action: high

Representative soil pr	rofile:	Texture	Permeability	capacity	pН
Ap 0 to 9	in loam		moderate	1.36 to 1.72 in	7.4 to 8.4
A 9 to 14	4 in clay loam		moderate	0.87 to 0.97 in	7.4 to 8.4
Bg 14 to 20	in clay loam		moderate	1.00 to 1.12 in	7.4 to 8.4
Cg 20 to 80) in loam		moderately slow	8.98 to 11.37 in	7.4 to 8.4



This report shows only the major soils in each map unit

Available water

Murray County, Minnesota

J107A--Lakepark-Roliss-Parnell, depressional, complex, 0 to 3 percent slopes

Parnell, depressional

Extent: 10 to 20 percent of the unit

Soil loss tolerance (T factor): 5

Landform(s): depressions on moraines

Wind erodibility group (WEG): 7

Slope gradient: 0 to 1 percent Wind erodibility index (WEI): 38

Parent material: till Kw factor (surface layer) .37

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 3w

Flooding: none Hydric soil: yes
Ponding: frequent Hydrologic group: C/D

Drainage class: very poorly drained Potential for frost action: high

Representative soil p	orofile:	Texture	Permeability	Available water capacity	pН
A1,A2 0 to 2	22 in sil	Ity clay loam	moderately slow	3.97 to 4.85 in	6.1 to 7.3
Btg 22 to 5	55 in sil	Ity clay	slow	4.30 to 5.29 in	6.1 to 7.3
BCg 55 to 8	30 in sil	Ity clay loam	slow	3.97 to 4.71 in	6.6 to 8.4

J195B--Poinsett silty clay loam, 2 to 6 percent slopes

Poinsett, occasional saturation

Extent: 70 to 90 percent of the unit

Landform(s): hills on lake plains

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 7

Slope gradient: 2 to 6 percent

Wind erodibility index (WEI): 38

Parent material: lacustrine deposits

Kw factor (surface layer) .28

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 2e

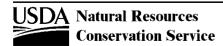
Flooding: none

Hydric soil: no
Ponding: none

Hydrologic group: B

Drainage class: well drained Potential for frost action: moderate

Representative so	il profile:	Texture	Permeability	Available water capacity	рН
Ap 0 t	o 8 in	silty clay loam	moderate	1.42 to 1.73 in	6.1 to 7.3
Bw 8 t	o 23 in	silty clay loam	moderate	2.39 to 2.84 in	6.1 to 7.3
Bk 23 t	o 62 in	silty clay loam	moderate	6.24 to 7.41 in	7.4 to 8.4
2C 62 t	o 80 in	clay loam	moderately slow	2.54 to 3.26 in	7.4 to 8.4



Murray County, Minnesota

J196A--Forada loam, 0 to 2 percent slopes

Forada

Extent: 70 to 90 percent of the unit

Landform(s): flats on outwash plains, drainageways on

outwash plains

Slope gradient: 0 to 2 percent

Parent material: outwash

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

Drainage class: poorly drained

Soil loss tolerance (T factor): 4

Wind erodibility group (WEG): 6

Wind erodibility index (WEI): 48 Kw factor (surface layer) .24 Land capability, nonirrigated 2w

Hydric soil: yes

Hydrologic group: B/D

Potential for frost action: high

Representative	soil profile:	Texture	Permeability	Available water capacity	рН
Ap,A 0	to 16 in	loam	moderate	3.23 to 3.55 in	6.1 to 7.3
Bg1 16	to 20 in	sandy loam	moderately rapid	0.35 to 0.59 in	6.1 to 7.3
Bg2 20	to 28 in	loam	moderate	1.42 to 1.57 in	6.1 to 7.3
2Cg1 28	to 33 in	coarse sand	rapid	0.26 to 0.77 in	6.6 to 7.3
2Cg2 33	to 60 in	coarse sand	rapid	1.34 to 4.02 in	7.4 to 8.4

Murray County, Minnesota

J199A--Fulda silty clay, 0 to 2 percent slopes

Fulda

Extent: 75 to 95 percent of the unit

Landform(s): flats on moraines, drainageways on moraines

Slope gradient: 0 to 2 percent Parent material: lacustrine deposits

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

Drainage class: poorly drained

Soil loss tolerance (*T factor*): 5 Wind erodibility group (WEG): 7

Wind erodibility index (WEI): 38
Kw factor (surface layer) .28
Land capability, nonirrigated 2w

Hydric soil: yes

Hydrologic group: C/D

Potential for frost action: high

Representative soil profile:	Texture	Permeability	Available water capacity	рН
Ap,A 0 to 13 in	silty clay	slow	1.69 to 2.21 in	6.1 to 7.3
Bg 13 to 33 in	silty clay	slow	2.01 to 3.81 in	6.6 to 7.3
Bkg 33 to 40 in	silty clay	slow	0.71 to 1.35 in	7.4 to 8.4
Cg 40 to 60 in	silty clay	slow	1.97 to 3.74 in	7.4 to 8.4

Murray County, Minnesota

J227D2--Buse, moderately eroded-Sandberg complex, 12 to 18 percent slopes

Buse, moderately eroded

Extent: 40 to 60 percent of the unit Landform(s): hills on moraines Slope gradient: 12 to 18 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5 Wind erodibility group (WEG): 4L Wind erodibility index (WEI): 86 Kw factor (surface layer) .28 Land capability, nonirrigated 4e

Hydric soil: no Hydrologic group: B

Potential for frost action: moderate

Land capability, nonirrigated 7e

Representative	e soil profile:	Texture	Permeability	Available water capacity	рН
Ap	0 to 8 in	loam	moderate	1.57 to 1.73 in	7.4 to 8.4
Bk1,Bk2	8 to 40 in	loam	moderate	4.84 to 6.13 in	7.4 to 8.4
C	10 to 60 in	loam	moderately slow	2 95 to 3 74 in	7 / to 8 /

Sandberg

Extent:20 to 40 percent of the unitSoil loss tolerance (T factor):3Landform(s):hills on morainesWind erodibility group (WEG):3Slope gradient:12 to 18 percentWind erodibility index (WEI):86Parent material:outwashKw factor (surface layer).15

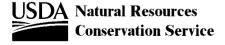
Flooding: none

Hydric soil: no
Ponding: none

Hydrologic group: A

Drainage class: excessively drained Potential for frost action: low

Representative	e soil profile:	Texture	Permeability	Available water capacity	рН
A1,A2	0 to 12 in	sandy loam	very rapid	1.54 to 1.77 in	6.1 to 7.8
Bk	12 to 28 in	gravelly sand	very rapid	0.32 to 0.97 in	7.4 to 8.4
C	28 to 80 in	gravelly sand	very rapid	1.04 to 3.12 in	7.4 to 8.4



Murray County, Minnesota

J232B--Barnes-Buse-Arvilla complex, 2 to 6 percent slopes

Barnes, occasional saturation

Extent: 30 to 40 percent of the unit

Soil loss tolerance (T factor): 5

Landform(s): hills on moraines, hills on till plains

Wind erodibility group (WEG): 6

Slope gradient: 2 to 6 percent Wind erodibility index (WEI): 48

Parent material: till

Kw factor (surface layer) .28

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 2e

Flooding: none

Hydric soil: no

Ponding: none

Hydrologic group: B

Drainage class: well drained Potential for frost action: moderate

Representative soil pr	rofile:	Texture	Permeability	Available water capacity	рН
Ap,A 0 to 11	l in loam		moderate	2.20 to 2.43 in	6.1 to 7.3
Bw 11 to 26	in loam		moderate	2.54 to 2.84 in	6.1 to 7.3
Bk 26 to 44	in loam		moderate	2.72 to 3.44 in	7.4 to 8.4
C 44 to 80) in loam		moderately slow	5.37 to 6.81 in	7.4 to 8.4

Buse

Extent: 25 to 35 percent of the unit Soil loss tolerance (T factor): 5

Landform(s): hills on moraines, hills on till plains Wind erodibility group (WEG): 4L

Slope gradient: 3 to 6 percent Wind erodibility index (WEI): 86

Parent material: till Kw factor (surface layer) .28
Restrictive feature(s): greater than 60 inches Land capability, nonirrigated 2e

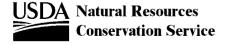
Flooding: none

Hydric soil: no

Ponding: none Hydrologic group: B

Drainage class: well drained Potential for frost action: moderate

Representativ	e soil profile:	Texture	Permeability	Available water capacity	рН
Ap	0 to 8 in	loam	moderate	1.57 to 1.73 in	7.4 to 8.4
Bk1,Bk2	8 to 40 in	loam	moderate	4.84 to 6.13 in	7.4 to 8.4
C	40 to 60 in	loam	moderately slow	2.95 to 3.74 in	7.4 to 8.4



Murray County, Minnesota

J232B--Barnes-Buse-Arvilla complex, 2 to 6 percent slopes

Arvilla

Extent: 20 to 30 percent of the unit

Landform(s): hills on moraines

Soil loss tolerance (T factor): 3

Wind erodibility group (WEG): 3

Slope gradient: 2 to 6 percent

Wind erodibility index (WEI): 86

Parent material: outwash

Kw factor (surface layer) .20

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 3e

Flooding: none

Hydric soil: no

Ponding: none

Hydrologic group: B

Drainage class: somewhat excessively drained Potential for frost action: low

Representative	soil profile:	Texture	Permeability	Available water capacity	pН
Ap	0 to 9 in	sandy loam	moderately rapid	1.18 to 1.36 in	6.1 to 7.3
Bw	9 to 14 in	sandy loam	moderately rapid	0.61 to 0.72 in	6.6 to 7.3
2Bk 1	4 to 48 in	gravelly sand	very rapid	0.68 to 1.69 in	7.4 to 8.4
2C 4	8 to 80 in	gravelly sand	very rapid	0.64 to 1.59 in	7.4 to 8.4



Murray County, Minnesota

J235C2--Buse-Barnes-Arvilla complex, 6 to 12 percent slopes, moderately eroded

Buse, moderately eroded

Extent: 30 to 40 percent of the unit Landform(s): hills on moraines Slope gradient: 6 to 12 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5 Wind erodibility group (WEG): 4L Wind erodibility index (WEI): 86 Kw factor (surface layer) .28 Land capability, nonirrigated 3e

Hydric soil: no Hydrologic group: B

Potential for frost action: moderate

Available water

Representative	e soil profile:	Texture	Permeability	capacity	рН
Ap	0 to 8 in	loam	moderate	1.57 to 1.73 in	7.4 to 8.4
Bk1,Bk2	8 to 40 in	loam	moderate	4.84 to 6.13 in	7.4 to 8.4
C 4	40 to 60 in	loam	moderately slow	2.95 to 3.74 in	7.4 to 8.4

Barnes, moderately eroded

Extent: 25 to 35 percent of the unit Landform(s): hills on moraines Slope gradient: 6 to 12 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

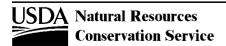
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .28
Land capability, nonirrigated 3e

Hydric soil: no Hydrologic group: B

Potential for frost action: moderate

Representativ	e soil profile:		Texture	Permeability	Available water capacity	рН
Ap	0 to 7 in	loam		moderate	1.42 to 1.56 in	6.1 to 7.3
Bw1,Bw2	7 to 19 in	loam		moderate	2.01 to 2.24 in	6.1 to 7.3
Bk	19 to 37 in	loam		moderate	2.72 to 3.44 in	7.4 to 8.4
C	37 to 60 in	loam		moderately slow	3.43 to 4.34 in	7.4 to 8.4



Murray County, Minnesota

J235C2--Buse-Barnes-Arvilla complex, 6 to 12 percent slopes, moderately eroded

Arvilla

Extent: 20 to 30 percent of the unit

Landform(s): hills on moraines

Soil loss tolerance (T factor): 3

Wind erodibility group (WEG): 3

Slope gradient: 6 to 12 percent

Wind erodibility index (WEI): 86

Parent material: outwash

Kw factor (surface layer) .20

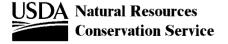
Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 4e

Flooding: none Hydric soil: no
Ponding: none Hydrologic group: B

Drainage class: somewhat excessively drained Potential for frost action: low

Representative	soil profile:	Texture	Permeability	capacity	pН
Ap () to 9 in	sandy loam	moderately rapid	1.18 to 1.36 in	6.1 to 7.3
Bw 9	9 to 14 in	sandy loam	moderately rapid	0.61 to 0.72 in	6.6 to 7.3
2Bk 14	1 to 48 in	gravelly sand	very rapid	0.68 to 1.69 in	7.4 to 8.4
2C 48	3 to 80 in	gravelly sand	very rapid	0.64 to 1.59 in	7.4 to 8.4



Available water

Murray County, Minnesota

J236A--Highpoint Lake silty clay, 0 to 2 percent slopes

Highpoint Lake

Extent: 80 to 95 percent of the unit

Soil loss tolerance (T factor): 5

Landform(s): flats on moraines

Wind erodibility group (WEG): 4

Slope gradient: 0 to 2 percent

Wind erodibility index (WEI): 86

Parent material: lacustrine deposits

Kw factor (surface layer) .28

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 2s

Flooding: none Hydric soil: no
Ponding: none Hydrologic group: C

Drainage class: moderately well drained Potential for frost action: high

Representative so	il profile:	Texture	Permeability	Available water capacity	рН
Ap,A 0 t	o 18 in	silty clay	slow	2.35 to 3.08 in	6.1 to 7.3
Bw 18 t	o 25 in	silty clay	slow	0.71 to 1.35 in	6.6 to 7.3
Bk 25 t	o 53 in	silty clay loam	slow	2.80 to 5.31 in	7.4 to 8.4
C 53 t	o 80 in	silty clay loam	slow	2 68 to 5 09 in	7 4 to 8 4



Murray County, Minnesota

J256A--Waubay silty clay loam, 1 to 3 percent slopes

Waubay

Extent: 65 to 85 percent of the unit

Soil loss tolerance (T factor): 5

Landform(s): flats on lake plains

Wind erodibility group (WEG): 7

Slope gradient: 1 to 3 percent

Wind erodibility index (WEI): 38

Parent material: lacustrine deposits

Kw factor (surface layer) .28

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 1

Flooding: none Hydric soil: no
Ponding: none Hydrologic group: B

Drainage class: moderately well drained Potential for frost action: high

Representative soil profil	e: Texture	Permeability	Available water capacity	рН
Ap,A 0 to 13 in	silty clay loam	moderate	2.34 to 2.86 in	6.1 to 7.3
Bw1,2 13 to 24 in	silty clay loam	moderate	1.76 to 2.09 in	6.1 to 7.3
Bk1,2 24 to 45 in	silt loam	moderate	3.34 to 3.96 in	7.4 to 8.4
C1 45 to 60 in	silt loam	moderate	2.39 to 2.84 in	7.4 to 8.4

Murray County, Minnesota

L139B--Wadena loam, 2 to 6 percent slopes

Wadena

Extent: 80 to 90 percent of the unit

Landform(s): hills on outwash plains, hills on terraces

Slope gradient: 2 to 6 percent

Parent material: loamy sediments over outwash Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 4
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .24
Land capability, nonirrigated 2e

Hydric soil: no Hydrologic group: B

Potential for frost action: low

Representative soil profile:	Texture	Permeability	Available water capacity	рН
Ap,A 0 to 13 in	loam	moderate	2.60 to 2.86 in	6.1 to 7.3
Bw1 13 to 20 in	loam	moderate	0.99 to 1.35 in	5.6 to 7.3
Bw2 20 to 30 in	sandy loam	moderately rapid	1.28 to 1.77 in	5.6 to 7.3
2C 30 to 60 in	gravelly coarse sand	rapid	0.60 to 1.20 in	6.6 to 8.4

Murray County, Minnesota

L142A--Jeffers clay loam, 0 to 2 percent slopes

Jeffers

Extent: 80 to 95 percent of the unit

Landform(s): rims on depressions on moraines, flats on

moraines

Slope gradient: 0 to 2 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

Drainage class: poorly drained

Soil loss tolerance (*T factor*): 5 Wind erodibility group (WEG): 6

Wind erodibility index (WEI): 48 Kw factor (surface layer) .24 Land capability, nonirrigated 2w

Hydric soil: yes

Hydrologic group: B/D

Potential for frost action: high

Representative	e soil profile:	_	Texture	Permeability	Available water capacity	рН
Ap,A	0 to 18 in	clay loam		moderate	3.08 to 3.44 in	7.4 to 8.4
Bg	18 to 22 in	clay loam		moderate	0.59 to 0.75 in	7.9 to 8.4
Bkg,Bk	22 to 35 in	clay loam		moderate	1.95 to 2.47 in	7.9 to 8.4
BC1,BC2	35 to 60 in	clay loam		moderately slow	3.47 to 3.97 in	7.4 to 8.4

Murray County, Minnesota

L149A--Romnell clay loam, 0 to 3 percent slopes

Romnell

Extent: 80 to 95 percent of the unit

Landform(s): drainageways on moraines, swales on moraines

Slope gradient: 0 to 3 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

Drainage class: poorly drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 6

Wind erodibility index (WEI): 48
Kw factor (surface layer) .28

Land capability, nonirrigated 2w

Hydric soil: yes

Hydrologic group: B/D

Potential for frost action: high

Representative soil profile	: Textui	re	Permeability	Available water capacity	рН
Ap,A 0 to 18 in	clay loam		moderate	3.08 to 4.35 in	6.6 to 7.8
Bg 18 to 27 in	clay loam		moderate	1.54 to 2.17 in	6.6 to 7.8
Btyg 27 to 33 in	clay loam		moderately slow	0.89 to 1.12 in	6.6 to 7.8
Bkg 33 to 43 in	clay loam		moderately slow	1.38 to 1.57 in	7.4 to 8.4
BCkg 43 to 80 in	clay loam		moderately slow	5.18 to 5.92 in	7.4 to 8.4

Murray County, Minnesota

L172D2--Storden, firm till-Annton complex, 12 to 18 percent slopes, moderately eroded

Storden, moderately eroded, firm till

Extent: 40 to 60 percent of the unit Landform(s): hills on moraines Slope gradient: 12 to 18 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5 Wind erodibility group (WEG): 4L Wind erodibility index (WEI): 86 Kw factor (surface layer) .28 Land capability, nonirrigated 4e

Hydric soil: no Hydrologic group: B

Potential for frost action: moderate

Representative soil pro	ofile:	Texture	Permeability	Available water capacity	рН
Ap 0 to 8 ir	n loam		moderate	1.57 to 1.73 in	7.4 to 8.4
Bk 8 to 20	in loam		moderate	2.07 to 2.32 in	7.9 to 8.4
BC 20 to 80	in clay loam		moderately slow	8.38 to 9.57 in	7.4 to 8.4

Annton, moderately, eroded

Extent: 20 to 45 percent of the unit Soil loss tolerance (T factor): 5 Landform(s): hills on moraines Slope gradient: 12 to 18 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

Drainage class: well drained

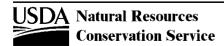
Wind erodibility group (WEG): 6 Wind erodibility index (WEI): 48 Kw factor (surface layer) .28 Land capability, nonirrigated 3e Hydric soil: no

Hydrologic group: B

Available water Permeability capacity 1.42 to 1.73 in 6.1 to 7.3 moderate moderate 3.08 to 3.44 in 6.1 to 7.3

Potential for frost action: moderate





This report shows only the major soils in each map unit

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Murray County, Minnesota

L173A--Moines clay loam, 1 to 3 percent slopes

Moines

Extent: 80 to 95 percent of the unit

Landform(s): flats on moraines, rises on moraines

Slope gradient: 1 to 3 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

Drainage class: somewhat poorly drained

Soil loss tolerance (T factor): 5 Wind erodibility group (WEG): 4L Wind erodibility index (WEI): 86 Kw factor (surface layer) .24 Land capability, nonirrigated 2s

Hydric soil: no Hydrologic group: B

Potential for frost action: moderate

Representative	soil profile:	Texture	Permeability	Available water capacity	рН
Ap,ABy	0 to 14 in	clay loam	moderate	2.41 to 2.69 in	7.4 to 8.4
Byg1,Byg2,Bk 1	4 to 40 in	loam	moderate	4.42 to 4.94 in	7.9 to 8.4
BCg 4	0 to 60 in	clay loam	moderately slow	2.76 to 3.15 in	7.4 to 8.4

Murray County, Minnesota

L198A--North Twin-Walnut grove complex, 0 to 2 percent slopes

North Twin

Extent: 60 to 80 percent of the unit

Soil loss tolerance (T factor): 5

Landform(s): hills on moraines

Wind erodibility group (WEG): 7

Slope gradient: 1 to 2 percent

Wind erodibility index (WEI): 38

Parent material: till

Kw factor (surface layer) .24

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 1

Flooding: none

Hydric soil: no
Ponding: none

Hydrologic group: B

Drainage class: moderately well drained Potential for frost action: moderate

Representativ	ve soil profile:	Texture	e	Permeability	Available water capacity	рН
Ap	0 to 10 in	clay loam		moderately slow	1.67 to 1.87 in	6.6 to 7.3
Bw	10 to 18 in	clay loam		moderately slow	1.16 to 1.49 in	6.1 to 7.3
Bk	18 to 31 in	clay loam		moderately slow	1.82 to 2.08 in	7.4 to 8.4
BCg,BC1,BC2	31 to 80 in	clay loam		moderately slow	6.83 to 7.81 in	7.4 to 8.4

Walnut Grove

Extent: 15 to 25 percent of the unit Soil loss tolerance (T factor): 5

Landform(s): flats on moraines, rises on moraines Wind erodibility group (WEG): 6

Slope gradient: 0 to 2 percent Wind erodibility index (WEI): 48
Parent material: till Kw factor (surface layer) .24

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 1

Flooding: none

Hydric soil: no
Ponding: none

Hydrologic group: B

Drainage class: somewhat poorly drained Potential for frost action: moderate

Representative soil profile:	Texture	Permeability	capacity	рН
Ap,A 0 to 14 in	clay loam	moderately slow	2.41 to 2.69 in	6.6 to 7.3
Bw 14 to 28 in	clay loam	moderate	2.48 to 3.31 in	6.1 to 7.3
Bk 28 to 39 in	clay loam	moderately slow	1.54 to 1.76 in	7.4 to 8.4
BC1,BC2 39 to 80 in	clay loam	moderately slow	5.73 to 6.55 in	7.4 to 8.4



This report shows only the major soils in each map unit

| Available water |

Tabular Data Version: 10
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Murray County, Minnesota

L198B--North Twin-Walnut grove complex, 1 to 4 percent slopes

North Twin

Extent: 50 to 70 percent of the unit

Soil loss tolerance (T factor): 5

Landform(s): hills on moraines

Wind erodibility group (WEG): 7

Slope gradient: 1 to 4 percent

Wind erodibility index (WEI): 38

Parent material: till

Kw factor (surface layer) .24

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 2e

Flooding: none Hydric soil: no
Ponding: none Hydrologic group: B

Drainage class: moderately well drained Potential for frost action: high

Representative so	il profile:	Texture	Permeability	Available water capacity	рН
Ap 0 to	o 10 in	clay loam	moderately slow	1.67 to 1.87 in	6.6 to 7.3
Bw 10 to	o 18 in	clay loam	moderately slow	1.16 to 1.49 in	6.1 to 7.3
Bk 18 to	o 31 in	clay loam	moderately slow	1.82 to 2.08 in	7.4 to 8.4
BCg,BC1,BC2 31 to	o 80 in	clay loam	moderately slow	6.83 to 7.81 in	7.4 to 8.4

Walnut Grove

Extent: 15 to 35 percent of the unit

Landform(s): flats on moraines, rises on moraines

Slope gradient: 1 to 3 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

Drainage class: somewhat poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6

Wind erodibility index (WEI): 48
Kw factor (surface layer) .24

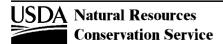
Land capability, nonirrigated 1

Hydric soil: no Hydrologic group: B

Potential for frost action: moderate

Available water

Representative soil profile:	Texture	Permeability	capacity	pН
Ap,A 0 to 14 in	clay loam	moderately slow	2.41 to 2.69 in	6.6 to 7.3
Bw 14 to 28 in	clay loam	moderate	2.48 to 3.31 in	6.1 to 7.3
Bk 28 to 39 in	clay loam	moderately slow	1.54 to 1.76 in	7.4 to 8.4
BC1,BC2 39 to 80 in	clay loam	moderately slow	5.73 to 6.55 in	7.4 to 8.4



Murray County, Minnesota

L202A--Pell Creek-Romnell complex, 0 to 2 percent slopes

Pell Creek

Extent: 35 to 70 percent of the unit Soil loss tolerance (T factor): 5

Landform(s): drainageways on moraines, flats on moraines, Wind erodibility group (WEG): 6

swales on moraines

Slope gradient: 0 to 2 percent Wind erodibility index (WEI): 48

Parent material: till Kw factor (surface layer) .28

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 2w

Flooding: none

Hydric soil: yes

Ponding: none

Hydrologic group: B/D

Drainage class: poorly drained Potential for frost action: high

Representativ	ve soil profile:	Texture	Permeability	Available water capacity	рН
Ap,A,AB	0 to 20 in	clay loam	moderate	3.41 to 3.81 in	6.1 to 7.3
Bg	20 to 34 in	clay loam	moderate	2.07 to 2.62 in	7.4 to 8.4
BCg,BC1,BC2	34 to 80 in	clay loam	moderately slow	6.45 to 7.37 in	7.4 to 8.4

Romnell

Extent: 15 to 45 percent of the unit

Soil loss tolerance (T factor): 5

Landform(s): drainageways on moraines, swales on moraines Wind erodibility group (WEG): 6
Slope gradient: 0 to 2 percent Wind erodibility index (WEI): 48

Parent material: till Kw factor (surface layer) .28
Restrictive feature(s): greater than 60 inches Land capability, nonirrigated 2w

Flooding: none

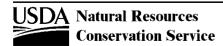
Hydric soil: yes

Ponding: none

Hydrologic group: B/D

Ponding: none Hydrologic group: B/D
Drainage class: poorly drained Potential for frost action: high

Representative soil	il profile:	Texture	Permeability	Available water capacity	рН
Ap,A 0 to	o 18 in clay loam		moderate	3.08 to 4.35 in	6.6 to 7.8
Bg 18 to	27 in clay loam		moderate	1.54 to 2.17 in	6.6 to 7.8
Btyg 27 to	33 in clay loam		moderately slow	0.89 to 1.12 in	6.6 to 7.8
Bkg 33 to	o 43 in clay loam		moderately slow	1.38 to 1.57 in	7.4 to 8.4
BCkg 43 to	o 60 in clay loam		moderately slow	2.37 to 2.71 in	7.4 to 8.4



Murray County, Minnesota

L207F--Belview-Ridgeton complex, 18 to 40 percent slopes, firm till substratum

Belview, firm till substratum

Extent: 65 to 85 percent of the unit Landform(s): escarpments on moraines

Slope gradient: 18 to 40 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5 Wind erodibility group (WEG): 4L Wind erodibility index (WEI): 86 Kw factor (surface layer) .28 Land capability, nonirrigated 6e

Hydric soil: no Hydrologic group: B

Potential for frost action: moderate

Representative	soil profile:	Texture	Permeability	Available water capacity	рН
A 0) to 8 in	loam	moderate	1.57 to 1.73 in	7.4 to 8.4
Bk 8	3 to 48 in	loam	moderate	6.02 to 7.63 in	7.4 to 8.4
BC1,BC2 48	3 to 80 in	clay loam	moderately slow	4.46 to 5.10 in	7.4 to 8.4

Ridgeton, firm till substratum

Extent: 10 to 20 percent of the unit Soil loss tolerance (T factor): 5

Landform(s): escarpments on moraines Wind erodibility group (WEG): 6
Slope gradient: 18 to 35 percent Wind erodibility index (WEI): 48

Parent material: colluvium over till

Kw factor (surface layer) .24

Restrictive feature(s): greater than 60 inches Land capability, nonirrigated 6e

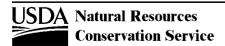
Flooding: none

Hydric soil: no
Ponding: none

Hydrologic group: B

Drainage class: well drained Potential for frost action: moderate

Representative	e soil profile:	Texture	Permeability	Available water capacity	рН
A1,A2,AB	0 to 31 in	loam	moderate	6.22 to 6.84 in	6.1 to 7.3
BA	31 to 49 in	loam	moderate	3.54 to 3.90 in	6.1 to 7.3
Bw	49 to 64 in	clay loam	moderate	2.46 to 2.76 in	6.1 to 7.3
BC	64 to 80 in	clay loam	moderately slow	2.20 to 2.52 in	7.4 to 8.4



Murray County, Minnesota

L213A--Calco silty clay loam, 0 to 2 percent slopes, frequently flooded

Calco, frequently flooded

Extent: 75 to 90 percent of the unit

Landform(s): flats on flood plains

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 4L

Slope gradient: 0 to 2 percent

Wind erodibility index (WEI): 86

Parent material: alluvium

Kw factor (surface layer) .28

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 5w

Flooding: frequent

Hydric soil: yes

Ponding: none

Hydrologic group: B/D

Drainage class: poorly drained Potential for frost action: high

Representative soil profile	e: Texture	Permeability	Available water capacity	рН
A 0 to 22 in	silty clay loam	moderate	4.63 to 5.07 in	7.4 to 8.4
Bg 22 to 50 in	silty clay loam	moderate	5.87 to 6.43 in	7.4 to 8.4
Cg 50 to 80 in	silty clay loam	moderate	5.39 to 5.98 in	7.4 to 8.4

L220A--Calco silty clay loam, 0 to 2 percent slopes, occasionally flooded

Calco, occasionally flooded

Extent: 75 to 90 percent of the unit

Soil loss tolerance (T factor): 5

Landform(s): flats on flood plains

Wind erodibility group (WEG): 4L

Slope gradient: 0 to 2 percent

Wind erodibility index (WEI): 86

Parent material: alluvium

Kw factor (surface layer) .28

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 2w

Flooding: occasional

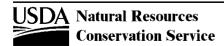
Hydric soil: yes

Ponding: none

Hydrologic group: B/D

Drainage class: poorly drained Potential for frost action: high

Representative soil profile:	Texture	Permeability	Available water capacity	рН
Ap,A1 0 to 14 in	silty clay loam	moderate	2.98 to 3.26 in	7.4 to 8.4
A2 14 to 40 in	silty clay loam	moderate	5.46 to 5.98 in	7.4 to 8.4
Cg 40 to 60 in	silty clay loam	moderate	3.54 to 3.94 in	7.4 to 8.4



Murray County, Minnesota

L221A--Du Page loam, 0 to 2 percent slopes, occasionally flooded

Du Page, occasionally flooded

Extent: 75 to 90 percent of the unit

Soil loss tolerance (T factor): 5

Landform(s): flats on flood plains, rises on flood plains

Wind erodibility group (WEG): 6

Slope gradient: 0 to 2 percent

Parent material: alluvium

Wind erodibility index (WEI): 48

Kw factor (surface layer) .28

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 2w

Flooding: occasional Hydric soil: no
Ponding: none Hydrologic group: B

Drainage class: moderately well drained Potential for frost action: moderate

Representative soil profile:	Texture	Permeability	Available water capacity	рН
Ap,A1,A2 0 to 36 in	loam	moderate	7.17 to 7.88 in	6.6 to 8.4
C1.C2 36 to 60 in	loam	moderate	4.08 to 4.56 in	7.4 to 8.4

L224A--Coland clay loam, 0 to 2 percent slopes, frequently flooded

Coland, frequently flooded

Extent: 65 to 90 percent of the unit

Landform(s): flats on flood plains

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 6

Slope gradient: 0 to 2 percent

Wind erodibility index (WEI): 48

Parent material: alluvium

Kw factor (surface layer) .24

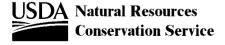
Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 5w

Flooding: frequent Hydric soil: yes
Ponding: none Hydrologic group: B/D

Drainage class: poorly drained Potential for frost action: high

Representative soil profile:	Texture	Permeability	Available water capacity	рН
A 0 to 42 in	clay loam	moderate	8.43 to 9.27 in	6.1 to 7.3
C 42 to 60 in	clav loam	moderate	3.54 to 3.90 in	6.1 to 7.3



Murray County, Minnesota

L225B--Annton-North Twin complex, 3 to 6 percent slopes

Annton

Extent: 40 to 55 percent of the unit

Landform(s): hills on moraines

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 6

Slope gradient: 3 to 6 percent

Wind erodibility index (WEI): 48

Parent material: till

Kw factor (surface layer) .28

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 2e

Flooding: none Hydric soil: no
Ponding: none Hydrologic group: B

Drainage class: well drained Potential for frost action: moderate

Representative soil profile	e: Texture	Permeability	capacity	рН
Ap 0 to 10 in	clay loam	moderate	1.77 to 2.17 in	6.1 to 7.3
Bw 10 to 22 in	clay loam	moderate	2.07 to 2.32 in	6.1 to 7.3
Bk 22 to 60 in	loam	moderately slow	5.29 to 6.05 in	7.4 to 8.4
BC 60 to 80 in	clay loam	moderately slow	2.81 to 3.21 in	7.4 to 8.4

North Twin

Extent: 15 to 45 percent of the unit

Soil loss tolerance (T factor): 5

Landform(s): hills on moraines

Wind erodibility group (WEG): 7

Slope gradient: 2 to 4 percent

Wind erodibility index (WEI): 38

Parent material: till

Kw factor (surface layer) .24

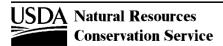
Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 2e

Flooding: none Hydric soil: no
Ponding: none Hydrologic group: B

Drainage class: moderately well drained Potential for frost action: moderate

Representativ	ve soil profile:	Т	exture	Permeability	Available water capacity	рН
Ар	0 to 10 in	clay loam		moderately slow	1.67 to 1.87 in	6.6 to 7.3
Bw	10 to 18 in	clay loam		moderately slow	1.16 to 1.49 in	6.1 to 7.3
Bk	18 to 31 in	clay loam		moderately slow	1.82 to 2.08 in	7.4 to 8.4
BCg,BC1,BC2	31 to 80 in	clay loam		moderately slow	6.83 to 7.81 in	7.4 to 8.4



This report shows only the major soils in each map unit

Available water

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Murray County, Minnesota

L226C2--Annton-Storden, firm till complex, 6 to 12 percent slopes, moderately eroded

Annton, moderately eroded

Extent: 30 to 60 percent of the unit Landform(s): hills on moraines Slope gradient: 6 to 12 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6

Wind erodibility index (WEI): 48
Kw factor (surface layer) .28

Land capability, nonirrigated 3e

Hydric soil: no

Hydrologic group: B

Potential for frost action: moderate

Representative soil pro	ofile:	Texture	Permeability	Available water capacity	рН
Ap 0 to 8 in	clay loam		moderate	1.42 to 1.73 in	6.1 to 7.3
Bw 8 to 21 i	in clay loam		moderate	2.21 to 2.47 in	6.1 to 7.3
Bk 21 to 34 i	in clay loam		moderately slow	1.82 to 2.08 in	7.4 to 8.4
BC1,BC2 34 to 80 i	in clay loam		moderately slow	6.45 to 7.37 in	7.4 to 8.4

Storden, moderately eroded, firm till

Extent: 25 to 50 percent of the unit

Landform(s): hills on moraines

Slope gradient: 6 to 12 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

Drainage class: well drained

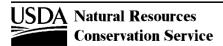
Soil loss tolerance (T factor): 5 Wind erodibility group (WEG): 4L Wind erodibility index (WEI): 86 Kw factor (surface layer) .28

Land capability, nonirrigated 3e

Hydric soil: no Hydrologic group: B

Potential for frost action: moderate

Representative	e soil profile:	Texture	Permeability	Available water capacity	рН
Ар	0 to 10 in	loam	moderate	1.97 to 2.17 in	7.4 to 8.4
Bk	10 to 31 in	clay loam	moderately slow	2.98 to 3.40 in	7.4 to 8.4
BC	31 to 80 in	clay loam	moderately slow	6.83 to 7.81 in	7.4 to 8.4



Murray County, Minnesota

L229A--Romnell silty clay loam, depressional, 0 to 1 percent slopes

Romnell, depressional

Extent: 75 to 95 percent of the unit

Landform(s): depressions on moraines

Wind erodibility group (WEG): 7

Slope gradient: 0 to 1 percent Wind erodibility index (WEI): 38

Parent material: till

Kw factor (surface layer) .32

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 3w

Flooding: none Hydric soil: yes
Ponding: frequent Hydrologic group: B/D

Drainage class: very poorly drained Potential for frost action: high

Representative soil profile:	Texture	Permeability	Available water capacity	рН
Ap,A 0 to 23 in	silty clay loam	moderately slow	4.80 to 5.25 in	6.1 to 7.8
Bg1,Bg2 23 to 43 in	silty clay loam	moderate	3.41 to 4.82 in	6.6 to 7.8
BCg1 43 to 51 in	clay loam	moderately slow	1.24 to 1.57 in	6.6 to 7.8
BCg2 51 to 80 in	clay loam	moderately slow	4.02 to 4.60 in	7.4 to 8.4



Murray County, Minnesota

L241B--Dickinson fine sandy loam, firm till substratum, 1 to 6 percent slopes

Dickinson, firm till substratum

Extent: 70 to 90 percent of the unit

Soil loss tolerance (T factor): 5

Landform(s): hills on moraines

Wind erodibility group (WEG): 3

Slope gradient: 1 to 6 percent

Wind erodibility index (WEI): 86

Parent material: outwash over till

Kw factor (surface layer) .20

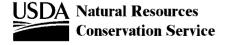
Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 3e

Flooding: none Hydric soil: no Ponding: none Hydrologic group: B

Drainage class: well drained Potential for frost action: moderate

Representative	soil profile:	Texture	Permeability	Available water capacity	рН
Ap,AB	0 to 16 in	fine sandy loam	moderately rapid	1.94 to 2.42 in	5.6 to 7.3
Bw ′	16 to 30 in	fine sandy loam	moderately rapid	1.65 to 2.07 in	5.1 to 6.5
C1 3	30 to 47 in	loamy sand	rapid	0.34 to 0.68 in	5.6 to 7.8
C2 4	47 to 60 in	sand	rapid	0.26 to 0.52 in	5.6 to 7.8
2BC 6	30 to 80 in	clay loam	moderately slow	2 81 to 3 21 in	7.4 to 8.4



Murray County, Minnesota

L242B--Terril loam, firm till substratum, 2 to 6 percent slopes

Terril, firm till substratum

Extent: 80 to 95 percent of the unit

Soil loss tolerance (T factor): 5

Landform(s): hills on moraines

Wind erodibility group (WEG): 6

Slope gradient: 2 to 6 percent

Wind erodibility index (WEI): 48

Parent material: colluvium over till

Kw factor (surface layer) .24

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 2e

Flooding: none Hydric soil: no
Ponding: none Hydrologic group: B

Drainage class: moderately well drained Potential for frost action: moderate

Representative so	oil profile:	Texture	Permeability	Available water capacity	рН
Ap,A1,A2 0	to 30 in	loam	moderate	5.98 to 6.58 in	6.1 to 7.3
A3,AB 30	to 40 in	loam	moderate	1.74 to 1.94 in	6.1 to 7.3
Bw 40	to 61 in	loam	moderate	3.34 to 3.76 in	6.1 to 7.3
BC 61	to 80 in	clay loam	moderately slow	2.65 to 3.02 in	7.4 to 8.4



Murray County, Minnesota

L243A--Havelock-Zumbro complex, 0 to 3 percent slopes, frequently flooded

Havelock, frequently flooded

Extent: 50 to 85 percent of the unit Landform(s): flats on flood plains

Slope gradient: 0 to 2 percent

Parent material: alluvium

Restrictive feature(s): greater than 60 inches

Flooding: frequent Ponding: none

Drainage class: poorly drained

Soil loss tolerance (T factor): 5 Wind erodibility group (WEG): 4L Wind erodibility index (WEI): 86 Kw factor (surface layer) .28 Land capability, nonirrigated 5w

Hydric soil: yes

Hydrologic group: B/D

Potential for frost action: high

Representative soil profile:	Texture	Permeability	Available water capacity	рН
A1,A2 0 to 32 in	loam	moderate	5.42 to 7.33 in	7.4 to 8.4
Ca 32 to 60 in	clay loam	moderate	4.75 to 5.59 in	7.4 to 8.4

Zumbro, frequently flooded

Extent: 10 to 20 percent of the unit

Landform(s): flood plains Slope gradient: 0 to 2 percent Parent material: alluvium

Restrictive feature(s): greater than 60 inches

Flooding: frequent Ponding: none

Drainage class: moderately well drained

Soil loss tolerance (T factor): 3
Wind erodibility group (WEG): 3

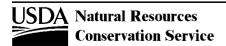
Wind erodibility index (WEI): 86 Kw factor (surface layer) .20 Land capability, nonirrigated 3s

Hydric soil: no Hydrologic group: A

Potential for frost action: low

Available water

Representative soil profi	e: Texture	Permeability	capacity	рН
A 0 to 10 in	fine sandy loam	moderately rapid	1.57 to 1.77 in	6.1 to 7.8
AB 10 to 42 in	loamy fine sand	rapid	2.58 to 3.23 in	6.1 to 7.8
C 42 to 60 in	fine sand	rapid	0.35 to 1.24 in	7.4 to 7.8



Murray County, Minnesota

L246B--Dickman sandy loam, firm till substratum, 1 to 6 percent slopes

Dickman, firm till substratum

Extent: 75 to 95 percent of the unit

Landform(s): outwash plains on hills

Soil loss tolerance (T factor): 3

Wind erodibility group (WEG): 3

Slope gradient: 1 to 6 percent

Wind erodibility index (WEI): 86

Parent material: outwash

Kw factor (surface layer) .20

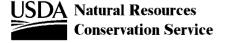
Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 3e

Flooding: none Hydric soil: no
Ponding: none Hydrologic group: A

Drainage class: somewhat excessively drained Potential for frost action: low

Representative soil profile	e: Texture	Permeability	capacity	рН
Ap,A 0 to 12 in	sandy loam	moderately rapid	1.54 to 1.77 in	6.1 to 6.5
Bw 12 to 19 in	sandy loam	moderately rapid	0.85 to 0.99 in	6.1 to 7.3
2Bw,C 19 to 60 in	coarse sand	rapid	2.05 to 2.87 in	6.1 to 7.8
3C 60 to 80 in	clay loam	moderately slow	2.81 to 3.21 in	7.4 to 8.4



Available water

Murray County, Minnesota

L247A--Moines-Walnut Grove complex, 1 to 3 percent slopes

Moines

Extent: 35 to 60 percent of the unit Soil loss

Landform(s): flats on moraines, rises on moraines

Slope gradient: 1 to 3 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

Drainage class: somewhat poorly drained

Soil loss tolerance (T factor): 5 Wind erodibility group (WEG): 4L Wind erodibility index (WEI): 86 Kw factor (surface layer) .24 Land capability, nonirrigated 2s

Hydric soil: no Hydrologic group: B

Potential for frost action: high

Representative soil profile:		Texture	Permeability	Available water capacity	рН
Ap,ABy	0 to 14 in	clay loam	moderate	2.41 to 2.69 in	7.4 to 8.4
Byg1,2,Bk	14 to 40 in	loam	moderate	4.42 to 4.94 in	7.9 to 8.4
BCg	40 to 60 in	clay loam	moderately slow	2.76 to 3.15 in	7.4 to 8.4

Walnut grove

Extent: 20 to 40 percent of the unit

Landform(s): flats on moraines, rises on moraines

Slope gradient: 1 to 3 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

Drainage class: somewhat poorly drained

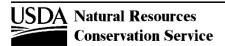
Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 7
Wind erodibility index (WEI): 38

Kw factor (surface layer) .24 Land capability, nonirrigated 1

Hydrologic group: B

Potential for frost action: moderate

Representative soil profile:			Texture	Permeability	Available water capacity	рН
Ap,A	0 to 14 in	clay loam		moderately slow	2.41 to 2.69 in	6.6 to 7.3
Bw 1	4 to 28 in	clay loam		moderate	2.48 to 3.31 in	6.1 to 7.3
Bk 2	28 to 39 in	clay loam		moderately slow	1.54 to 1.76 in	7.4 to 8.4
BC1,2 3	89 to 80 in	clay loam		moderately slow	5.73 to 6.55 in	7.4 to 8.4



Murray County, Minnesota

L248B--Annton-Swanlake, firm till complex, 3 to 6 percent slopes

Annton

Extent: 35 to 65 percent of the unit Landform(s): hills on moraines

Slope gradient: 3 to 6 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .28
Land capability, nonirrigated 2e

Hydric soil: no Hydrologic group: B

Potential for frost action: moderate

Representative soil profile:	Texture	Permeability	Available water capacity	рН
Ap 0 to 10 in	clay loam	moderate	1.77 to 2.17 in	6.1 to 7.3
Bw 10 to 22 in	clay loam	moderate	2.07 to 2.32 in	6.1 to 7.3
Bk 22 to 60 in	loam	moderately slow	5.29 to 6.05 in	7.4 to 8.4
BC 60 to 80 in	clay loam	moderately slow	2.81 to 3.21 in	7.4 to 8.4

Swanlake, firm till

Extent: 30 to 50 percent of the unit Landform(s): hills on moraines Slope gradient: 3 to 6 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

Drainage class: well drained

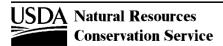
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Kw factor (surface layer) .24 Land capability, nonirrigated 2e

Hydric soil: no Hydrologic group: B

Potential for frost action: moderate

Representative soil profile:	Texture	Permeability	Available water capacity	рН
Ap 0 to 8 in	clay loam	moderately slow	1.34 to 1.50 in	7.4 to 8.4
ABk 8 to 18 in	clay loam	moderately slow	1.43 to 1.64 in	7.4 to 8.4
Bk 18 to 40 in	clay loam	moderately slow	3.09 to 3.53 in	7.4 to 8.4
BC 40 to 80 in	clay loam	moderately slow	5.57 to 6.36 in	7.4 to 8.4



Murray County, Minnesota

L249A--Knoke silty clay loam, firm till substratum, depressional, 0 to 1 percent slopes

Knoke, firm till substratum, depressional

Extent: 75 to 90 percent of the unit

Soil loss tolerance (T factor): 5

Landform(s): depressions on moraines

Wind erodibility group (WEG): 4L

Slope gradient: 0 to 1 percent

Wind erodibility index (WEI): 86

Parent material: lacustrine sediments over till

Restrictive feature(s): greater than 60 inches

Kw factor (surface layer) .32

Land capability, nonirrigated 3w

Flooding: none Hydric soil: yes

Ponding: frequent Hydrologic group: B/D

Drainage class: very poorly drained Potential for frost action: high

Representative soil profile:		Texture	Permeability	Available water capacity	рН
Ap,A1,A2	0 to 10 in	mucky silty clay loam	moderately slow	2.07 to 2.26 in	7.4 to 8.4
ABg	10 to 42 in	silty clay loam	moderately slow	6.78 to 7.43 in	7.4 to 8.4
Bg	42 to 63 in	silty clay loam	moderately slow	3.76 to 4.17 in	7.4 to 8.4
2BCa	63 to 80 in	clay loam	moderately slow	2.37 to 2.71 in	7.4 to 8.4

M-W--Water, miscellaneous

Water, miscellaneous

Extent: 100 percent of the unit Soil loss tolerance (T factor):

Landform(s): Wind erodibility group (WEG):
Slope gradient: Wind erodibility index (WEI):
Parent material: Kw factor (surface layer)

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated

Flooding: Hydric soil:
Ponding: Hydrologic group:

Drainage class: Potential for frost action:

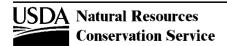
Representative soil profile:

Texture

Permeability

Available water capacity

PH



Murray County, Minnesota

P3A--Biscay silty clay loam, 0 to 2 percent slopes, occasionally flooded

Biscay, occasionally flooded

Extent: 80 to 90 percent of the unit

Landform(s): flats on outwash plains

Soil loss tolerance (T factor): 4

Wind erodibility group (WEG): 7

Slope gradient: 0 to 2 percent

Wind erodibility index (WEI): 38

Parent material: outwash

Kw factor (surface layer) .28

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 2w

Flooding: occasional Hydric soil: yes

Ponding: none Hydrologic group: B/D

Drainage class: poorly drained Potential for frost action: high

Representative	soil profile:	Texture	Permeability	Available water capacity	рН
Ap,A1	0 to 16 in	silty clay loam	moderate	3.23 to 3.55 in	6.1 to 7.3
A2 1	6 to 21 in	clay loam	moderate	0.80 to 0.90 in	6.6 to 7.3
Bg 2	1 to 31 in	clay loam	moderate	1.74 to 1.94 in	6.6 to 7.3
2Cg 3	1 to 60 in	coarse sand	rapid	0.57 to 1.15 in	7.4 to 8.4

P4A--Calco silty clay loam, 0 to 2 percent slopes, frequently flooded

Calco, frequently flooded

Extent: 75 to 85 percent of the unit

Landform(s): flats on flood plains

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 4L

Slope gradient: 0 to 2 percent

Wind erodibility index (WEI): 86

Parent material: alluvium

Kw factor (surface layer) .28

Restrictive feature(s): greater than 60 inches

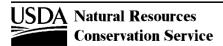
Land capability, nonirrigated 5w

Flooding: frequent Hydric soil: yes

Ponding: none Hydrologic group: B/D

Drainage class: poorly drained Potential for frost action: high

Representative soil profile.	Texture	Permeability	capacity	рН
A1,A2 0 to 36 in	silty clay loam	moderate	7.52 to 8.24 in	7.4 to 8.4
Cg 36 to 60 in	silty clay loam	moderate	5.04 to 5.52 in	7.4 to 8.4



Murray County, Minnesota

P5A--Calco silty clay loam, 0 to 2 percent slopes, occasionally flooded

Calco, occasionally flooded

Extent: 75 to 85 percent of the unit

Landform(s): flats on flood plains

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 4L

Slope gradient: 0 to 2 percent

Wind erodibility index (WEI): 86

Parent material: alluvium

Kw factor (surface layer) .28

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 2w

Hydric soil: yes

Hydrologic group: B/D

Flooding: occasional

Ponding: none

Drainage class: poorly drained Potential for frost action: high

Representativ	ve soil profile:	Texture	Permeability	Available water capacity	рН
Ap,A1,A2,A3	0 to 36 in	silty clay loam	moderate	7.52 to 8.24 in	7.4 to 8.4
Bg	36 to 44 in	silty clay loam	moderate	1.74 to 1.90 in	7.4 to 8.4
Cg	44 to 60 in	silty clay loam	moderate	3.31 to 3.62 in	7.4 to 8.4

P8A--Cylinder loam, 0 to 2 percent slopes, occasionally flooded

Cylinder, occasionally flooded

Extent: 75 to 85 percent of the unit

Landform(s): flats on outwash plains

Soil loss tolerance (T factor): 4

Wind erodibility group (WEG): 6

Slope gradient: 0 to 2 percent

Wind erodibility index (WEI): 48

Parent material: alluvium over outwash

Kw factor (surface layer) .24

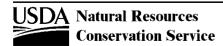
Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 2s

Flooding: occasional Hydric soil: no
Ponding: none Hydrologic group: B

Drainage class: somewhat poorly drained Potential for frost action: moderate

Representative soil profile:		Texture	Permeability	Available water capacity	рН
Ap,A1,A2	0 to 18 in	loam	moderate	3.62 to 3.98 in	6.1 to 7.3
Bg1,Bg2	18 to 28 in	loam	moderate	1.67 to 1.87 in	6.1 to 7.3
2BC	28 to 39 in	gravelly sand	very rapid	0.22 to 0.44 in	7.4 to 8.4
2C1,2C2	39 to 60 in	gravelly sand	very rapid	0.42 to 0.83 in	7.4 to 8.4



Murray County, Minnesota

P12B--Everly silty clay loam, 2 to 6 percent slopes

Everly

Extent: 75 to 85 percent of the unit

Landform(s): hills on till plains

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 7

Slope gradient: 2 to 6 percent

Wind erodibility index (WEI): 38

Parent material: loess over till

Kw factor (surface layer) .24

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 2e

Flooding: none Hydric soil: no
Ponding: none Hydrologic group: B

Drainage class: well drained Potential for frost action: moderate

Representative	soil profile:	Texture	Permeability	Available water capacity	рН
Ap	0 to 10 in	silty clay loam	moderate	1.67 to 1.87 in	6.1 to 7.3
Bw 1	10 to 18 in	silty clay loam	moderate	1.24 to 1.41 in	6.1 to 7.3
2Bk,2BC 1	18 to 80 in	clay loam	moderately slow	8.65 to 11.13 in	7.4 to 8.4

P12C2--Everly silty clay loam, 6 to 12 percent slopes, moderately eroded

Everly, moderately eroded

Extent: 75 to 85 percent of the unit

Landform(s): hills on till plains

Wind erodibility group (WEG): 7

Slope gradient: 6 to 12 percent

Wind erodibility index (WEI): 38

Parent material: loess over till

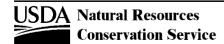
Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 3e

Flooding: none Hydric soil: no
Ponding: none Hydrologic group: B

Drainage class: well drained Potential for frost action: moderate

Representative	e soil profile:	Texture	Permeability	Available water capacity	рН
Ар	0 to 7 in	silty clay loam	moderate	1.20 to 1.35 in	6.1 to 7.3
Bw	7 to 16 in	silty clay loam	moderate	1.36 to 1.54 in	6.1 to 7.3
2Bk,2BC	16 to 80 in	clay loam	moderately slow	8.93 to 11.48 in	7.4 to 8.4



Murray County, Minnesota

P20B--Judson silt loam, 3 to 8 percent slopes

Judson

Extent: 75 to 85 percent of the unit

Landform(s): hills on till plains

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 6

Slope gradient: 3 to 8 percent

Wind erodibility index (WEI): 48

Parent material: colluvium

Kw factor (surface layer) .28

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 2e

Flooding: none

Hydric soil: no
Ponding: none

Hydrologic group: B

Drainage class: well drained Potential for frost action: high

Representative	e soil profile:	Texture	Permeability	Available water capacity	рН
Ap,A	0 to 36 in	silt loam	moderate	6.81 to 7.88 in	6.1 to 7.3
Bw1,Bw2	36 to 56 in	silty clay loam	moderate	3.81 to 4.42 in	6.1 to 7.3
C	56 to 60 in	silty clay loam	moderate	0.67 to 0.79 in	6.6 to 7.8

P28A--Ransom silty clay loam, 1 to 3 percent slopes

Ransom

Extent: 75 to 85 percent of the unit

Landform(s): hills on till plains

Wind erodibility group (WEG): 7

Slope gradient: 1 to 3 percent

Wind erodibility index (WEI): 38

Parent material: loess over till

Kw factor (surface layer) .32

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 1

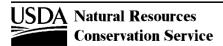
Flooding: none

Hydric soil: no

Ponding: none Hydrologic group: B

Drainage class: somewhat poorly drained Potential for frost action: high

Representative	e soil profile:	Texture	Permeability	Available water capacity	рН
Ap,A,AB	0 to 16 in	silty clay loam	moderate	2.91 to 3.55 in	6.6 to 7.3
Bw1,Bw2,Bw3	16 to 33 in	silty clay loam	moderate	2.71 to 3.22 in	6.6 to 7.3
2BCk,2BC 3	33 to 80 in	clay loam	moderately slow	6.56 to 8.43 in	7.4 to 8.4



Murray County, Minnesota

P29A--Rushmore silty clay loam, 0 to 2 percent slopes

Rushmore

Extent: 75 to 85 percent of the unit

Landform(s): hills on till plains

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 7

Slope gradient: 0 to 2 percent

Wind erodibility index (WEI): 38

Parent material: loess over till

Kw factor (surface layer) .28

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 2w

Flooding: none

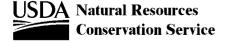
Hydric soil: yes

Ponding: none

Hydrologic group: B/D

Drainage class: poorly drained Potential for frost action: high

Representative	e soil profile:	Texture	Permeability	Available water capacity	рН
Ap,A,AB	0 to 18 in	silty clay loam	moderate	3.26 to 3.98 in	6.6 to 7.3
Bg1,Bg2	18 to 24 in	silty clay loam	moderate	0.94 to 1.12 in	6.6 to 7.3
BCg	24 to 32 in	silty clay loam	moderate	1.26 to 1.50 in	7.4 to 7.8
2BCkg,2BCg	32 to 80 in	clay loam	moderately slow	6.72 to 8.65 in	7.4 to 8.4



Murray County, Minnesota

P30B--Sac silty clay loam, 2 to 5 percent slopes

Sac

Extent: 75 to 85 percent of the unit

Landform(s): hills on till plains

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 7

Slope gradient: 2 to 5 percent

Wind erodibility index (WEI): 38

Parent material: loess over till

Kw factor (surface layer) .32

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 2e

Hydric soil: no

Flooding: none Hydric soil: no
Ponding: none Hydrologic group: B

Drainage class: moderately well drained Potential for frost action: high

Representative	e soil profile:	Texture	Permeability	Available water capacity	рН
Ap,A	0 to 11 in	silty clay loam	moderate	2.31 to 2.54 in	6.1 to 7.3
BA,Bw1	11 to 28 in	silty clay loam	moderate	3.05 to 3.39 in	6.1 to 7.3
2Bw2	28 to 33 in	clay loam	moderately slow	0.72 to 0.92 in	6.1 to 7.3
2BCk,2BC	33 to 60 in	clay loam	moderately slow	3.75 to 4.82 in	7.4 to 8.4

P33A--Spillco silt loam, 0 to 2 percent slopes, occasionally flooded

Spillco, occasionally flooded

Extent: 80 to 90 percent of the unit

Landform(s): flats on flood plains

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 6

Slope gradient: 0 to 2 percent

Wind erodibility index (WEI): 48

Parent material: alluvium

Kw factor (surface layer) .24

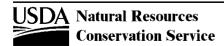
Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 1

Flooding: occasional Hydric soil: no
Ponding: none Hydrologic group: B

Drainage class: moderately well drained Potential for frost action: moderate

Representativ	ve soil profile:	Texture	Permeability	Available water capacity	рН
A1	0 to 10 in	silt loam	moderate	1.87 to 2.07 in	6.6 to 7.3
A2,A3,A4	10 to 35 in	silt loam	moderate	4.79 to 5.29 in	6.6 to 8.4
C	35 to 60 in	loam	moderate	4.71 to 5.21 in	6.6 to 8.4



Murray County, Minnesota

P37D--Talmo gravelly sandy loam, 6 to 35 percent slopes

Talmo

Extent: 85 to 95 percent of the unit

Landform(s): hills on outwash plains

Soil loss tolerance (T factor): 3

Wind erodibility group (WEG): 8

Slope gradient: 6 to 35 percent

Wind erodibility index (WEI): 0

Parent material: outwash

Kw factor (surface layer) .10

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 7s

Flooding: none

Hydric soil: no

Ponding: none

Hydrologic group: A

Drainage class: excessively drained Potential for frost action: low

Representative	e soil profile:	Texture	Permeability	Available water capacity	рН
A	0 to 9 in	gravelly sandy loam	moderately rapid	0.91 to 1.09 in	6.1 to 8.4
AC	9 to 12 in	gravelly loamy sand	rapid	0.06 to 0.11 in	7.4 to 8.4
C1,C2	12 to 60 in	very gravelly sand	rapid	0.96 to 1.92 in	7.4 to 8.4

P38C--Thurman sandy loam, 6 to 12 percent slopes

Thurman

Extent: 85 to 95 percent of the unit

Landform(s): hills on outwash plains

Slope gradient: 6 to 12 percent

Parent material: outwash

Restrictive feature(s): greater than 60 inches

Flooding: none

Soil loss tolerance (T factor): 3

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

Kw factor (surface layer) .20

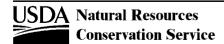
Land capability, nonirrigated 4e

Hydric soil: no

Ponding: none Hydrologic group: A

Drainage class: somewhat excessively drained Potential for frost action: low

Representativ	e soil profile:	Texture	Permeability	Available water capacity	рН
Ap,A	0 to 10 in	sandy loam	moderately rapid	1.28 to 1.48 in	6.1 to 6.5
AC	10 to 20 in	sandy loam	moderately rapid	1.23 to 1.43 in	6.1 to 7.3
C1,C2	20 to 60 in	sand	rapid	0.80 to 2.78 in	6.1 to 7.8



Murray County, Minnesota

P42A--Whitewood silty clay loam, 0 to 2 percent slopes

Whitewood

Extent: 65 to 80 percent of the unit

Landform(s): hills on till plains

Wind erodibility group (WEG): 7

Slope gradient: 0 to 2 percent

Wind erodibility index (WEI): 38

Parent material: alluvium

Kw factor (surface layer) .28

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 2w

Flooding: none Hydric soil: yes
Ponding: none Hydrologic group: B/D

Drainage class: poorly drained Potential for frost action: high

Representative	soil profile:	Texture	Permeability	Available water capacity	рН
Ap,A,Bw	0 to 25 in	silty clay loam	moderately slow	4.79 to 5.54 in	6.1 to 7.3
Bg1,Bg2 2	25 to 43 in	silty clay loam	moderately slow	3.01 to 3.54 in	6.6 to 7.8
Bkg 4	13 to 60 in	silty clay loam	moderately slow	2.88 to 3.39 in	7.4 to 8.4



Murray County, Minnesota

P43A--Wilmonton silty clay loam, 1 to 3 percent slopes

Wilmonton

Extent: 80 to 90 percent of the unit

Soil loss tolerance (T factor): 5

Landform(s): hills on till plains

Wind erodibility group (WEG): 7

Slope gradient: 1 to 3 percent

Wind erodibility index (WEI): 38

Parent material: loess over till

Kw factor (surface layer) .28

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 1

Flooding: none Hydric soil: no Ponding: none Hydrologic group: B

Drainage class: somewhat poorly drained Potential for frost action: moderate

Representative	e soil profile:	Texture	Permeability	Available water capacity	pН
Ap,A	0 to 15 in	silty clay loam	moderate	2.99 to 3.89 in	6.1 to 7.3
Bw	15 to 20 in	loam	moderate	0.92 to 1.23 in	6.1 to 7.3
2Bw	20 to 25 in	clay loam	moderately slow	0.72 to 0.92 in	6.1 to 7.3
2Bk	25 to 55 in	clay loam	moderately slow	4.19 to 5.39 in	7.4 to 8.4
2BC1.2BC2	55 to 80 in	clay loam	moderately slow	3.47 to 4.46 in	7.4 to 8.4



Murray County, Minnesota

P44E--Shindler clay loam, 15 to 45 percent slopes

Shindler

Extent: 80 to 90 percent of the unit Landform(s): hills on till plains Slope gradient: 15 to 45 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5 Wind erodibility group (WEG): 4L Wind erodibility index (WEI): 86 Kw factor (surface layer) .32 Land capability, nonirrigated 7e

Hydric soil: no Hydrologic group: B

Potential for frost action: moderate

Representative so	oil profile:	Texture	Permeability	capacity	рН
A 0	to 7 in	clay loam	moderately slow	1.13 to 1.28 in	7.4 to 8.4
Bw 7	to 11 in	clay loam	moderately slow	0.55 to 0.63 in	7.4 to 8.4
Bk1,Bk2 11	to 35 in	clay loam	moderately slow	3.36 to 3.84 in	7.4 to 8.4
BC 35	to 60 in	clay loam	moderately slow	3.47 to 3.97 in	7.4 to 8.4

Murray County, Minnesota

P45E--Moneta clay loam, 15 to 45 percent slopes

Moneta

Extent: 80 to 90 percent of the unit

Landform(s): hills on till plains

Slope gradient: 15 to 45 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5 Wind erodibility group (WEG): 4L Wind erodibility index (WEI): 86 Kw factor (surface layer) .32 Land capability, nonirrigated 7e

Hydrologic group: B

Potential for frost action: moderate

Representative	soil prof	file:	Texture	Permeability	Available water capacity	рН
A	0 to 9 in	clay loam		moderately slow	1.27 to 1.63 in	7.4 to 8.4
BA	9 to 13 ir	n clay loam		moderately slow	0.55 to 0.71 in	7.4 to 8.4
Bk,BC1 ′	13 to 53 ir	n clay loam		moderately slow	5.62 to 7.23 in	7.4 to 8.4
BC2 5	53 to 80 ir	n clay loam		moderately slow	3.75 to 4.82 in	7.4 to 8.4

P48A--Allendorf silty clay loam, 0 to 2 percent slopes

Allendorf

Extent: 80 to 90 percent of the unit

Landform(s): flats on outwash plains

Soil loss tolerance (T factor): 4

Wind erodibility group (WEG): 7

Slope gradient: 0 to 2 percent

Wind erodibility index (WEI): 38

Parent material: loess over outwash

Kw factor (surface layer) .28

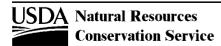
Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 2s

Flooding: none Hydric soil: no Ponding: none Hydrologic group: B

Drainage class: well drained Potential for frost action: moderate

Representative soil profile:	Texture	Permeability	Available water capacity	рН
Ap,A 0 to 14 in	silty clay loam	moderate	2.69 to 3.12 in	6.1 to 7.3
Bw1,Bw2,Bw3 14 to 34 in	silty clay loam	moderate	3.35 to 3.94 in	6.1 to 7.3
2BC,2C1 34 to 60 in	very gravelly loamy coarse sand	very rapid	0.52 to 1.04 in	6.1 to 8.4



This report shows only the major soils in each map unit

Tabular Data Version: 10
Tabular Data Version Date: 10/12/2010

Murray County, Minnesota

P48B--Allendorf silty clay loam, 2 to 6 percent slopes

Allendorf

Extent: 80 to 90 percent of the unit

Landform(s): hills on outwash plains

Soil loss tolerance (T factor): 4

Wind erodibility group (WEG): 7

Slope gradient: 2 to 6 percent

Wind erodibility index (WEI): 38

Parent material: loess over outwash

Kw factor (surface layer) .28

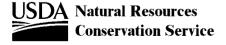
Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 2e

Flooding: none Hydric soil: no
Ponding: none Hydrologic group: B

Drainage class: well drained Potential for frost action: moderate

Representative soil pro	file: Texture	Permeability	Available water capacity	рН
Ap,A 0 to 14 in	silty clay loam	moderate	2.69 to 3.12 in	6.1 to 7.3
Bw1,Bw2,Bw3 14 to 34 in	n silty clay loam	moderate	3.35 to 3.94 in	6.1 to 7.3
 2BC.2C1 34 to 60 ir	n very gravelly loamy coarse sand	very rapid	0.52 to 1.04 in	6.1 to 8.4



Murray County, Minnesota

P51C2--Everly-Moneta-Talmo complex, 6 to 12 percent slopes, moderately eroded

Everly, moderately eroded

Extent: 35 to 45 percent of the unit

Soil loss tolerance (T factor): 5

Landform(s): hills on till plains

Wind erodibility group (WEG): 6

Slope gradient: 6 to 12 percent

Wind erodibility index (WEI): 48

Parent material: loess over till

Kw factor (surface layer) .24

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 3e

Flooding: none Hydric soil: no
Ponding: none Hydrologic group: B

Drainage class: well drained Potential for frost action: moderate

Representative	soil profile:	Texture	Permeability	capacity	рН
Ap	0 to 8 in	silty clay loam	moderate	1.34 to 1.50 in	6.1 to 7.3
Bw	8 to 26 in	silty clay loam	moderate	2.72 to 3.08 in	6.1 to 7.3
2Bk.2BC 2	26 to 80 in	clay loam	moderately slow	7.55 to 9.71 in	7.4 to 8.4

Moneta, moderately eroded

Extent: 15 to 25 percent of the unit

Landform(s): hills on till plains

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 4L

Slope gradient: 8 to 12 percent

Wind erodibility index (WEI): 86

Parent material: till

Kw factor (surface layer) .32

Restrictive feature(s): greater than 60 inches

Kw factor (surface layer) .32

Land capability, nonirrigated 3e

Flooding: none

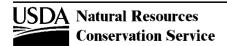
Hydric soil: no

Ponding: none

Hydrologic group: B

Drainage class: well drained Potential for frost action: moderate

Representative	soil profile:	Texture	Permeability	Available water capacity	рН
Ар	0 to 8 in	clay loam	moderately slow	1.10 to 1.42 in	7.4 to 8.4
Bk	8 to 38 in	clay loam	moderately slow	4.24 to 5.46 in	7.4 to 8.4
BC 3	8 to 80 in	clay loam	moderately slow	5.84 to 7.51 in	7.4 to 8.4



This report shows only the major soils in each map unit

Murray County, Minnesota

P51C2--Everly-Moneta-Talmo complex, 6 to 12 percent slopes, moderately eroded

Talmo, moderately eroded

Extent: 15 to 25 percent of the unit

Landform(s): hills on outwash plains

Soil loss tolerance (T factor): 3

Wind erodibility group (WEG): 8

Slope gradient: 6 to 12 percent

Wind erodibility index (WEI): 0

Parent material: outwash

Kw factor (surface layer) .10

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 4s

Flooding: none

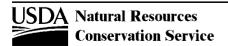
Hydric soil: no

Ponding: none

Hydrologic group: A

Drainage class: excessively drained Potential for frost action: low

Representative soil pro	ofile: Texture	Permeability	Available water capacity	рН
A 0 to 6 in	gravelly sandy loam	moderately rapid	0.59 to 0.71 in	6.1 to 8.4
C 6 to 60	in very gravelly sand	rapid	1.08 to 2.16 in	7.4 to 8.4



Murray County, Minnesota

P52D2--Moneta-Everly-Talmo complex, 12 to 18 percent slopes, moderately eroded

Moneta, moderately eroded

Extent: 35 to 45 percent of the unit Landform(s): hills on till plains Slope gradient: 12 to 18 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 3 Wind erodibility group (WEG): 4L Wind erodibility index (WEI): 86 Kw factor (surface layer) .32 Land capability, nonirrigated 4e

Hydrologic group: B

Potential for frost action: moderate

Available water

Representative soil pr	rofile:	Texture	Permeability	capacity	рН
A 0 to 7	in clay loam		moderately slow	0.99 to 1.28 in	7.4 to 8.4
Bk 7 to 30	0 in clay loam		moderately slow	3.20 to 4.11 in	7.4 to 8.4
BCk 30 to 80	0 in clay loam		moderately slow	7.00 to 9.00 in	7.4 to 8.4

Everly, moderately eroded

Extent: 15 to 25 percent of the unit Landform(s): hills on till plains
Slope gradient: 12 to 18 percent

Parent material: loess over till

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

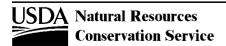
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .24
Land capability, nonirrigated 4e

Hydric soil: no Hydrologic group: B

Potential for frost action: moderate

Representative	soil profile:	Texture	Permeability	Available water capacity	рН
Ap	0 to 8 in	silty clay loam	moderate	1.34 to 1.50 in	6.1 to 7.3
Bw	8 to 16 in	silty clay loam	moderate	1.24 to 1.41 in	6.1 to 7.3
2Bw 1	16 to 38 in	clay loam	moderately slow	3.09 to 3.97 in	6.7 to 7.3
2Bk,2BC 3	88 to 80 in	clay loam	moderately slow	5.84 to 7.51 in	7.4 to 8.4



Murray County, Minnesota

P52D2--Moneta-Everly-Talmo complex, 12 to 18 percent slopes, moderately eroded

Talmo, moderately eroded

Extent:15 to 25 percent of the unitSoil loss tolerance (T factor):5Landform(s):hills on outwash plainsWind erodibility group (WEG):8Slope gradient:12 to 18 percentWind erodibility index (WEI):0Parent material:outwashKw factor (surface layer).10

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 6s

Flooding: none Hydric soil: no
Ponding: none Hydrologic group: A

Drainage class: excessively drained Potential for frost action: low

Representative	soil profile:	Texture	Permeability	capacity	рН
A 0) to 8 in	gravelly sandy loam	moderately rapid	0.79 to 0.94 in	6.1 to 8.4
C 8	3 to 60 in	very gravelly sand	rapid	1.04 to 2.08 in	7.4 to 8.4



Murray County, Minnesota

P53C2--Everly-Moneta complex, 6 to 12 percent slopes, moderately eroded

Everly, moderately eroded

Extent: 50 to 60 percent of the unit

Soil loss tolerance (T factor): 5

Landform(s): hills on till plains

Wind erodibility group (WEG): 6

Slope gradient: 6 to 12 percent

Wind erodibility index (WEI): 48

Parent material: loess over till

Kw factor (surface layer) .24

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 3e

Flooding: none

Hydric soil: no
Ponding: none

Hydrologic group: B

Drainage class: well drained Potential for frost action: moderate

Representative soil profile:		Texture	Permeability	capacity	рН
Ap	0 to 10 in	silty clay loam	moderate	1.67 to 1.87 in	6.1 to 7.3
Bw	10 to 18 in	silty clay loam	moderate	1.24 to 1.41 in	6.1 to 7.3
2Bk,2BC	18 to 80 in	clay loam	moderately slow	8.65 to 11.13 in	7.4 to 8.4

Moneta, moderately eroded

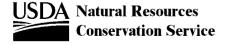
Extent:20 to 30 percent of the unitSoil loss tolerance (T factor):5Landform(s):hills on till plainsWind erodibility group (WEG):4LSlope gradient:8 to 12 percentWind erodibility index (WEI):86Parent material:tillKw factor (surface layer).32

Restrictive feature(s): greater than 60 inches Land capability, nonirrigated 3e

Flooding: none Hydric soil: no
Ponding: none Hydrologic group: B

Drainage class: well drained Potential for frost action: moderate

Representative soil profile:		Texture	Permeability	Available water capacity	рН
Ap	0 to 7 in	clay loam	moderately slow	0.99 to 1.28 in	7.4 to 8.4
Bk	7 to 33 in	clay loam	moderately slow	3.64 to 4.68 in	7.4 to 8.4
BC 3	33 to 80 in	clay loam	moderately slow	6.56 to 8.43 in	7.4 to 8.4



This report shows only the major soils in each map unit

Murray County, Minnesota

P54D2--Moneta-Everly complex, 12 to 18 percent slopes, moderately eroded

Moneta, moderately eroded

Extent: 40 to 50 percent of the unit Landform(s): hills on till plains Slope gradient: 12 to 18 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5 Wind erodibility group (WEG): 4L Wind erodibility index (WEI): 86 Kw factor (surface layer) .32 Land capability, nonirrigated 4e

Hydric soil: no Hydrologic group: B

Potential for frost action: moderate

Representative soil profile:		Texture	Permeability	Available water capacity	рН
A	0 to 9 in	clay loam	moderately slow	1.27 to 1.63 in	7.4 to 8.4
BA	9 to 13 in	clay loam	moderately slow	0.55 to 0.71 in	7.4 to 8.4
Bk,BC1	13 to 53 in	clay loam	moderately slow	5.62 to 7.23 in	7.4 to 8.4
BC2	53 to 80 in	clay loam	moderately slow	3.75 to 4.82 in	7.4 to 8.4

Everly, moderately eroded

Extent: 35 to 45 percent of the unit Landform(s): hills on till plains Slope gradient: 12 to 18 percent Parent material: loess over till

Restrictive feature(s): greater than 60 inches

Flooding: none Ponding: none

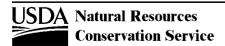
Drainage class: well drained

Sc	oil loss tolerance (T factor):	5
W	ind erodibility group (WEG).	6
W	ind erodibility index (WEI):	48
Kv	v factor (surface layer) .24	4
La	and capability, nonirrigated	4e

Hydric soil: no Hydrologic group: B

Potential for frost action: moderate

Representative soil profile:	Texture	Permeability	Available water capacity	рН
Ap 0 to 10 in	silty clay loam	moderate	1.67 to 1.87 in	6.1 to 7.3
Bw 10 to 15 in	silty clay loam	moderate	0.77 to 0.87 in	6.1 to 7.3
2Bw 15 to 44 in	clay loam	moderately slow	4.08 to 5.24 in	6.7 to 7.3
2Bk.2BC 44 to 80 in	clay loam	moderately slow	5.02 to 6.45 in	7.4 to 8.4



Murray County, Minnesota

P56A--Kanaranzi silt loam, 0 to 2 percent slopes

Kanaranzi

Extent: 75 to 85 percent of the unitSoil loss tolerance (T factor): 4Landform(s): flats on outwash plainsWind erodibility group (WEG): 6Slope gradient: 0 to 2 percentWind erodibility index (WEI): 48Parent material: loess over outwashKw factor (surface layer) .32

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 3s

Flooding: none Hydric soil: no
Ponding: none Hydrologic group: B

Drainage class: well drained Potential for frost action: moderate

Representative	soil profile:	Texture	Permeability	Available water capacity	рН
Ap	0 to 7 in	silt loam	moderate	1.56 to 1.70 in	6.1 to 7.3
BA,Bw	7 to 20 in	loam	moderate	2.60 to 2.86 in	6.1 to 7.3
2C1-3 2	20 to 80 in	very gravelly coarse sand	rapid	1.20 to 2.39 in	6.1 to 8.4

P56B--Kanaranzi silt loam, 2 to 6 percent slopes

Kanaranzi

Extent: 75 to 85 percent of the unit

Landform(s): hills on outwash plains

Soil loss tolerance (T factor): 4

Wind erodibility group (WEG): 6

Slope gradient: 2 to 6 percent

Wind erodibility index (WEI): 48

Parent material: loess over outwash

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated 3e

Flooding: none

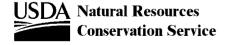
Hydric soil: no

Ponding: none

Hydrologic group: B

Drainage class: well drained Potential for frost action: moderate

Representative soil profile:		Texture	Permeability	Available water capacity	рН
Ар	0 to 7 in	silt loam	moderate	1.56 to 1.70 in	6.1 to 7.3
BA,Bw	7 to 20 in	loam	moderate	2.60 to 2.86 in	6.1 to 7.3
2C1-3	20 to 80 in	very gravelly coarse sand	rapid	1.20 to 2.39 in	6.1 to 8.4



Murray County, Minnesota

W--Water

Water

Extent: 100 percent of the unit Soil loss tolerance (T factor):

Landform(s): Wind erodibility group (WEG):
Slope gradient: Wind erodibility index (WEI):
Parent material: Kw factor (surface layer)

Restrictive feature(s): greater than 60 inches

Land capability, nonirrigated

Flooding: Hydric soil:
Ponding: Hydrologic group:

Drainage class: Potential for frost action:

Representative soil profile:

Texture

Permeability

Available water capacity

pH

This report provides a semitabular listing of some soil and site properties and interpretations that are valuable in communicating the concept of a map unit. The report also provides easy access to the commonly used conservation planning information in one place. The major soil components in each map unit are displayed. Minor components may be displayed if they are included in the database and are selected at the time the report is generated.

